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ABSTRACT

This report presents a comprehensive overview of the parental role in higher education. It is on various data sources, including a nationally representative survey of 750 parents of current college students. The report addresses issues ranging from selecting an institution, to paying tuition, to patterns of saving and borrowing, to the demographic characteristics of both parents and students. Major findings include the following: (1) although parental financial assistance appears to be increasing modestly, the dollar amounts are covering a smaller proportion of the average price of attendance; (2) most parents are not going into debt to provide financial assistance to their children, but those who do borrow are borrowing larger amounts; (3) parents may not be realistic about what they should expect to pay for college; and (4) the most important factors influencing how much parents pay to assist their children appear to be income and the total price of attendance. Following an executive summary and an introduction, report sections address the following topics: changing roles, previous research, characteristics affecting parental roles, examination of data from the National Center on Educational Statistics, the study's parent survey, and conclusions from the survey's findings. Seventeen tables detail study findings. Appended are additional methodological and statistical information. (Contains 35 references.) (DB)

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It's All Relative

The Role of Parents in College Financing and Enrollment

William L. Stringer, Alisa F. Cunningham,
Colleen T. O'Brien and Jamie P. Merisotis

The Institute for Higher Education Policy

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It's All Relative

The Role of Parents in College Financing and Enrollment

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Executive Summary

In the U.S. system of higher education, the responsibility for paying the total price of attending college is shared by several actors: the federal government, states, institutions, philanthropic donors, students, and parents.

Each of these players influences the decision-making process regarding where a student will enroll in college, and how he or she will finance that education. Much has been written about the roles that students, governments, and the colleges themselves play in this structure. But comparatively little attention has been focused on the role of parents in college financing and enrollment.

This report, prepared by The Institute for Higher Education Policy with support from the USA Group Foundation, presents a comprehensive overview of the parental role in higher education. The report helps to redress the dearth of recent information regarding parents' behavior in college enrollment and financing. It also contributes to the debate among policymakers and the general public regarding who should pay for higher education.

Using data from a variety of sources, including the U.S. Department of Education and a specially commissioned, nationally representative survey of parents of current college students, the report covers myriad aspects of the role of parents. The report addresses issues ranging from selecting an institution, to paying tuition, to patterns of saving and borrowing, to the demographic characteristics of both parents and students. Several important findings stand out as essential to our understanding of parents' role:

- **Despite the fact that parents' financial assistance to their children appears to be modestly increasing, the dollar amounts are covering a diminishing proportion of the average price of attendance.**

Most parents contribute a substantial share of the price of attendance to their children. Non-monetary contributions such as food, clothing, and transportation are the most common form of parents' support to their children (about 80 percent provide such support), followed closely by cash gifts that do not need to be repaid (more than two-thirds do so). Only about 10 percent provide personal loans to their children.

The average amounts of parents' financial assistance are increasing only modestly over time. For example, of the two-thirds who provided gifts, the average amount increased from $3,902 in 1986-87 to $4,535 in 1992-93, a 16 percent increase in actual dollars but a decrease of about 12 percent when inflation is taken into account. By 1997-98, according to The Institute's national survey of parents, that amount increased to just over $6,000, an inflation-adjusted decrease of about 8 percent since 1986-87.

More important, the average price of attending a postsecondary institution has been increasing more rapidly than have parental contribution amounts. The average price of attendance (tuition, fees, room, and board) at a four-year institution rose by an average of 81 percent from 1986-87 to 1996-97, or 38 percent after accounting for inflation. As a result, parents' financial assistance to their children appears to be covering a declining proportion of college prices. For example, according to data from the U.S. Department of Education, average cash gift amounts covered 69 percent of the total price in 1986-87, but only 52 percent in 1992-93. Similarly, data on loans from parents to their children indicate that parents covered 48 percent of the total price in 1986-87 but only 27 percent in 1992-93. The Institute's 1997-98 survey found that parent gifts averaged 55 percent of the total price of attendance, and loans averaged 33 percent. In other words, parents may be providing more support to their children on average, but because prices are increasing so rapidly, the amounts cover a smaller proportion of the total price of going to college.

The fact that parents are not able to increase their financial contributions by an amount sufficient to keep up with college prices could be explained by many factors: increased consumer debt (such as credit cards) may have limited their available resources; they may have failed to start saving early enough; or their household incomes may not have grown in real terms. On the other hand, the lag may have been caused by a lack of willingness on the part of parents in proportion to the cost of education. Indeed, the widespread availability of student loans may have allowed them to avoid increasing their levels of financial assistance. Additional study is necessary to ascertain how the aggregate burden of higher education expenses is being shifted to the other groups (students, government, institutions) in the financing equation.

- **Most parents do not appear to be going into debt to provide financial assistance to their children, but those who do borrow are taking on increasing amounts.**

Parents provide financial assistance to their children from a limited set of resources: current income, savings, or borrowing. While most parents use a combination of such resources to help pay for college, current income is the most common resource, used by approximately two-thirds of parents, followed closely by

Despite the fact that parents' financial assistance to their children appears to be **modestly increasing,** the dollar amounts are covering a diminishing proportion of the average price of attendance.

Parents may not be realistic about what they should **expect to pay** for college.

savings (about half). Loans appear to play a minor role as a resource for parents; at most, approximately one-quarter of parents are using borrowed funds.

There are many possible reasons for this aversion to loans. Parents may not need to take out loans; they may not have access to credit; or they may be shifting the burden of debt to their children. As noted in this report, a substantial proportion of parents allow their children to take out lower-cost student loans, and promise to help them make the payments. Nevertheless, it is significant that for those who do borrow, average loan amounts have increased significantly in the 1990s. The average amount borrowed by parents increased from about $9,000 in 1992-93 to $14,000 in 1997-98, an increase of more than 50 percent in just five years. This trend suggests that the rapidly increasing price of higher education may be compelling some parents to borrow ever higher amounts of money.

- **Parents may not be realistic about what they should expect to pay for college.**

Despite strong support to assist their children prior to college, parents may not be realistic in their financial planning to help them go to college. For example, The Institute's survey of parents found that the average amount that had been saved by parents for their children's education was $9,956, or about 25 percent of the average price of attendance at a public four-year college over four years.

Previous research on the parents of children entering 10th grade has found that, when asked how they planned to pay for college, the top choice was savings, followed by grants and scholarships, and loans. Current income — cited above as the top actual source of funds — was a distant fourth, suggesting that a severe dichotomy exists between intentions and reality among parents in their college financial planning. It is also fair to note that financial planning is difficult at a time when college prices are outpacing inflation.

- **The most important factors influencing how much parents pay to assist their children appear to be income and the total price of attendance.**

The provision, amount, and source of parental financial assistance varies according to specific demographic and institutional characteristics. In particular, the level of parent income and the total price of attendance best explain the variation in parental behavior. According to The Institute's survey of parents, for example, students who attended institutions with a tuition level of more than $20,000 received an average of $12,906 in cash gifts from their parents, compared with the $3,244 received by students who paid tuition of $1,001 to $2,000. Similarly, students from families with incomes of $100,000 or more received an average of $9,373 in gifts, whereas their counterparts from families with incomes under $20,000 received only $2,825. At the same time, parent income is closely tied to the choice of institution, which in turn determines the price of attendance.

After accounting for the influence of other variables, the study reveals a significant relationship between parents' efforts to save (the total amount saved relative to their annual income) and the amount they contribute to their children's educational expenses. This finding suggests that parents who place a high priority on saving for education tend to give their children more support. The effects of other variables, such as the degree aspirations of the children or the type of institution (two-year or four-year, public or private) attended, generally

occur through the influences of parent income and price of attendance.

- **Parents are using their experience and knowledge to assist their children prior to college enrollment.**

Given the complexity of admissions and financial aid procedures, it is not surprising that parents assist their children in many ways prior to enrollment. According to The Institute's survey, 83 percent had discussed their children's interests in degrees or careers with them; 72 percent helped fill out applications; 65 percent gave advice in choosing which schools to apply to; 57 percent spoke with an admissions officer; and 50 percent helped decide which college their children would attend. Only 6 percent of parents did not participate in any part of the admissions process.

In addition, parents participate widely in helping with financial aid applications and planning a financing strategy. Almost two-thirds of parents (63 percent) had children who applied for financial aid prior to their first year of college. Of those whose children applied for financial aid, 84 percent helped fill out financial aid application forms; 80 percent obtained aid information for their children; 52 percent spoke with a financial aid officer; and 49 percent spoke with a guidance counselor. Fewer than 10 percent of these parents did not participate.

However, previous studies indicate that parents' awareness of many aspects of admissions and financial aid could be improved, especially for parents who did not go to college themselves. It is clear that parents who attended college have an inherent advantage in helping their children enroll in higher education.

Other findings of interest include:

- A significant minority of parents — 37 percent — have used credit cards to help pay for education expenses. Fourteen percent have charged the tuition and fees of their children to a credit card.

- Some parents attach conditions or rules to their contributions to their children's education. For example, 24 percent required that their children maintain a specific grade point average, and 7 percent required them to earn a degree.

- Almost half of all respondents to The Institute's survey of parents promised to pay all or most of their children's college expenses, while an additional 42 percent promised to pay some of the costs. Fewer than 10 percent did not offer to pay at least some of the costs.

- Despite the fairly low percentages of parents who are borrowing, average annual amounts under the federal Parent Loans for Undergraduate Student (PLUS) program appear to be escalating rapidly. Average amounts borrowed through PLUS increased from $2,387 in 1986-87 to $3,375 in 1992-93.

The findings presented in this report suggest several lessons that policymakers and parents can learn regarding the role of parents in their children's pursuit of higher education.

- Knowledge of how the process works is used by parents to help their children apply for admission and financial aid. Disparities exist between parents who went to college themselves and those who did not. Federal, state, and institutionally based awareness programs that target children of parents who did not go to college, combined with simplified financial

The findings presented in this report suggest several lessons that **policymakers and parents** can learn regarding the role of parents in their children's pursuit of higher education.

In general, parents do not appear to be **overburdened by debt** taken on for the purpose of paying for their children's higher education.

aid application procedures, would help to significantly close this gap.

- Similarly, parents who save for college have an apparent advantage in supporting their children's postsecondary aspirations; policies that promote early planning and awareness of the benefits of saving may allow parents to continue supporting their children's education in the future.

- Efforts to persuade colleges to focus more on containing costs and increasing revenues from non-tuition sources would help ameliorate the price/affordability gap.

- The importance of parent income and the price of attendance in influencing parents' level of financial assistance to their children suggests that students from lower-income families need extra support from non-parent sources; this further justifies the continued support and growth of federal and state need-based student aid, particularly grant assistance.

- In general, parents do not appear to be overburdened by debt taken on for the purpose of paying for their children's higher education. Nevertheless, a certain subset of parents may be obtaining increasing amounts of loans as college prices continue to rise. Efforts to counsel parents on appropriate borrowing amounts may help to reduce over-borrowing among this subset of parents.

INTRODUCTION

Economics, culture, and pragmatism all suggest that parents play a significant role in their children's decisions regarding postsecondary education.

In the U.S. system of higher education, the responsibility for paying the total price of attending college is shared by several actors: the federal government, states, institutions, philanthropic donors, students, and parents.

Each of these players influences the decision-making process regarding where a student will enroll in college, and how he or she will finance that education. Much has been written about the roles that students, governments, and the colleges themselves play in these processes. But comparatively little attention has been focused on the role of parents in college financing and enrollment.

Not only do parents play an important role in influencing their children's choices among institutions and in preparing a financial aid strategy to enable such choices, they also are likely partners in the actual financing. Undergraduate students rely on many different sources to finance their education, including financial aid, their own savings and income, and contributions from parents, relatives, and others. Knowing how parents are contributing — what type and from what source of funds — can advance the debate about how much government should expect parents to contribute to their children's higher education costs.

Student and parent interaction in these areas is complicated. Beyond the issue of whether to pursue postsecondary study or not, both student and parent must weigh the aptitudes and aspirations of the student and the expected return from pursuing a particular curriculum at a certain school against the price of attendance (net of gifts or grants). All of these issues must be considered within the context of the students' and parents' limited resources — including their ability to borrow. To make matters more complex, the process is a simultaneous one rather than one with neat beginning and ending points.

The college enrollment and financing decision-making framework can be viewed as consisting of four components: analysis of the potential returns to education; calculation of the cost; evaluation of available financial resources; and review of other external influences and issues (such as the state of the economy or cultural and racial discrimination). These components reflect the unique situation of each student and family. Any policy or action that changes these variables will affect college-related decisions.

Research questions

This report examines the decision-making process from the parents' perspective. It focuses on the parents of college students who were classified as financially dependent at the time data were collected.[1] The questions that frame the analysis of the parents' role include the following:[2]

- What is the role of parents in selecting an institution, developing a financial aid strategy, and assisting with financing during and after enrollment?
- How do parents use money from their savings, loans, or current income to meet the financial commitments that they have made to their child's education?
- To what extent do various characteristics impact parents' financial support for their children's higher education?
- Ultimately, what are the policy implications, if any, of differences in parental support?

The analysis of the role of parents in postsecondary education is presented in three sections. First, we review the existing literature relating to this topic. The research reinforces the notion that parents play an important role in the college selection and financing process. Second, we present basic statistics — including percentages of students receiving gifts, personal loans, and non-monetary contributions from their parents, the average amounts received, and correlations by certain demographic characteristics — drawn from large-scale surveys conducted by the U. S. Department of Education's National Center for Education Statistics (NCES). These data primarily reflect the 1986-87 and 1992-93 academic years.[3] Finally, to supplement the findings from the analysis of NCES data, The Institute for Higher Education Policy commissioned a nationally representative survey of 750 parents of currently enrolled dependent students. The survey provides data that can be examined in more detail than the basic NCES statistics.[4]

What is the role of parents in selecting an institution, developing a **financial aid strategy,** and assisting with financing during and after enrollment?

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The expectation of college attendance and **parental assistance** has increased significantly, particularly in the case of female students.

CHANGING ROLES

This inquiry is based not only on the observation that the parent's role is important, but also on the belief that the parent's role may be changing. Thus, it is helpful to describe the context within which parents and students make decisions, especially regarding the financing of higher education. Early this century, financing postsecondary education was primarily a family responsibility, one that was met — by those families who could afford it — via parent savings, contributions from their current income, and student earnings. A number of mitigating factors allowed this financial structure to exist for many years: 1) a relatively small proportion of the population attended college; 2) there was less pressure in the job market to have postsecondary training; and 3) alternative financial support beyond family resources was limited. However, each of these aspects has changed in recent years.

Attendance rates

The number of students matriculating past high school was a relatively small portion of the college-age population before World War II; since then, the proportion has risen substantially. Although the ratios vary considerably by family economic status, racial composition, geographic location, and other characteristics, the expectation of college attendance and parental assistance beyond high school has increased significantly, particularly in the case of female students. For example, while the overall rate of attendance increased by 17 percentage points (from 45 percent to 62 percent), it jumped 23 percentage points (from 38 percent to 61 percent) for females. (See Table 1, p. 49.)

Labor market changes

In the past, postsecondary education was not a prerequisite for the majority of jobs and, hence, there was less pressure on parents to ensure that their children attended college or some other form of postsecondary education. Researchers have documented an increasing premium for college education in the past 10 to 15 years: the trend toward relatively greater payoffs to higher levels of education is unmistakable. For example, by 1994 white male college graduates were earning 82 percent more than their counterparts who had only a high school degree. (See Tables 2a and 2b, pp. 50 and 51.)

Alternative financial support

Non-family sources of support such as governmental grants and loans were relatively rare before the 1960s. With the passage of the Higher Education Act in 1965, federal grants and then loans became an increasingly vital part of postsecondary education financing. Between 1963-64 and 1970-71, the estimated average amount of student financial aid awarded quadrupled, largely due to the increase in federal awards (Flint, 1997, p. 315). In more recent years, an even wider array of student financial aid has become available, including the newly enacted federal tax credits. The most rapid growth has occurred in student loans, especially unsubsidized loans. For example, Federal Family Education Loan (FFEL) volume increased by 30 percent from 1993 to 1994, the year after the 1992 reauthorization of the Higher Education Act (The Institute for Higher Education Policy and The Education Resources Institute, 1995), which expanded access to student loans. The impact of changes in the student loan program can be seen in Table 3 (p. 52). Note particularly the increase in the average loan amounts and the increase in the proportion of students receiving

loans, along with the less dramatic growth in grant and work-study programs.

Thus, the context within which parent/student decisions about postsecondary education are made has changed significantly. One would anticipate that the growth in attendance rates has increased pressure on families to save but has reduced the amount of family resources available to each child (with due adjustments for a reduction in average family size). The growing return to education may have increased pressure on parents to assist their children financially, while the easier access to student loans simultaneously may have reduced the reliance of students on parental assistance. In addition, there are a number of other reasons to expect that the parent role has changed.

Increasing prices

The increasing price of higher education in recent years may have encouraged parents to contribute more to their child's education, in terms of both financial support and time devoted to searching for financial aid. Between the 1985-86 and 1995-96 academic years, the average price of attendance at public four-year colleges increased 82 percent, or 28 percent after accounting for inflation.[5] The average price at private four-year colleges increased 91 percent, or 34 percent after considering inflation (NCES, 1997). At the same time, real median family income rose by only 1 percent (U.S. Bureau of the Census, 1997). (See Table 4, p. 53.)

Changes in parental financial behavior

The greater use of credit-based financing by consumers — including parents — for non-education-related purchases may have reduced parents' ability or desire to borrow for their children's education. It also may have diminished planning for college financing. Despite the perception of greater reliance on credit, data indicate consumer credit has remained a relatively constant proportion of income. However, the form of credit has changed substantially. (See Table 5, p. 54.)

Altered family structures

Changing family structures (more single-parent families, for instance) may have reduced the role of parents in their children's higher education decisions. The Bureau of Census reported that in 1970, 89 percent of families with children had both parents in the household; 10 percent had mothers only, and 1 percent had fathers only. By 1997, the comparable percentages had increased to 23 percent with mothers only and 5 percent with fathers only (Bryson and Casper, 1998, p. 5). The implication is that single parents cannot spend as much time, and presumably money, assisting their children's postsecondary efforts.

The growing return to education may have **increased pressure on parents** to assist children financially.

Studies seem to indicate that the **decisions on selection and financing** are not made at the same point in the process.

PREVIOUS RESEARCH

A review of several important studies can establish the base of knowledge that already exists regarding the parents' role and suggest variables that should be included in this report.

The literature in this area has generally focused on the following issues:

- the involvement of parents in selecting an institution and developing a financial strategy;
- the financial burden on parents;
- characteristics of both the family and the student that impact the parents' role; and
- parents' use of savings, borrowing, or current income to meet the financial commitment that they have made to their child.

Relatively few studies have examined directly parents' behavior, especially within recent years. The studies that do exist were, for the most part, aimed at steering policy in the late 1980s and early 1990s in preparation for legislative changes in federal student lending programs that culminated in the Higher Education Amendments of 1992.[6]

Parent contributions

A 1997 Gallup survey of parents with children in their first year of high school found that 97 percent of parents agreed with the statement, "A college education will enrich the quality of my child's life." Almost as many concurred that "Even with what it costs today, college is still a good investment." Two-thirds of the parents interviewed felt that "A college education is the most important investment I will make for my child" (Miller, 1997, p. 9). A recent study by the American Council on Education (ACE, 1998) supported these findings, concluding that parents believe investing in a college education is worth the money. Given these attitudes, it is not surprising that most studies have found a strong and active role played by most parents in the decision-making process.

Studies seem to indicate that the decisions on selection and financing are not made at the same point in the process. For instance, a 1991 study of Indiana parents and students indicated that the decision of where to attend college began as early as the ninth grade, whereas the details of financing were not assembled until much later, the 11th or 12th grade (Hossler, Schmit, and Bouse, 1991).

The lag in financial planning seems to be attributable to both general shortsightedness and — despite many attempts to remedy the situation via early awareness programs — a lack of understanding on the part of parents and students of the financing options that are available. A 1985 study by Olson and Rosenfeld indicated that parents were the most effective source of information about student assistance programs but, more important, that the information was available only via parents who had gone to college themselves. Children of lower-income families, who were more likely to have parents who did not attend college, were at a serious disadvantage in obtaining information.

Awareness of college financing options has not increased to an appreciable extent. A study by the U.S. General Accounting Office (GAO, 1990) found that only 12 percent of students in high school at that time knew of available federal programs. Muffet, Smith, and Gordon, also writing

in 1990, found through a national sample of parents of prospective students that parents were basically uninformed of and confused by financial aid options. A more recent study (ACE, 1998) found that most parents do not know how much financial aid is available, where it comes from, or how to obtain it.

Ultimately parents, through a highly individualized process, may decide to contribute a certain amount of resources toward their children's postsecondary education. Using a framework defined by a NCES report (Choy, Henke, and Schmitt, 1992), parental assistance may be characterized as one or more of three types of support:

- ***Gifts***, funds that parents pay either to their children or directly to the institution for tuition, housing, or other expenses. Gifts do not need to be repaid.

- ***Loans***, funds that parents personally provide to their children expecting repayment, with the terms and conditions varying by family.

- ***Non-monetary ("in-kind") contributions***, non-cash items, such as food, clothing, housing, and transportation, that parents provide to their children; for example, students may live at home while enrolled or during the summer, which reduces their housing expenses.

Using data from the 1986-87 academic year, the NCES report found that 92 percent of financially dependent undergraduates received gifts, loans or non-monetary contributions from their parents. The paper also revealed differences according to various characteristics. For example, 83 percent of the students who attended private, non-profit institutions received gifts or loans from their parents, compared with 73 percent of the students in public institutions and 63 percent of the students in private, for-profit institutions.

Relative financial contributions

The relative burden of financial support upon the parent can be measured by examining parental financial contributions as a proportion of either income or expected levels of contribution. Although studies of the relationship between parent contributions and income levels are not available, it is clear that in recent years family income has not kept pace with increases in college prices (ED, 1997, p. 70; GAO, 1996). This lag suggests that parents now must contribute a greater percentage of their incomes in order to cover a constant proportion of their children's total price of attendance.

Several studies have measured the ratio of actual parent contributions to "expected contributions." When a student applies for financial aid, an estimated family contribution (EFC) is calculated by a federal formula that takes into account the income of both parents and students, the number of children in college, and family size. EFC is therefore an estimate of the ability of the student and his or her immediate family to contribute to the price of attending a particular institution. The student is eligible to receive financial aid up to the amount needed to make up the difference between the EFC and the student budget, or total price of attendance. It is important to note, however, that the EFC is suggested simply to calculate the size of the potential financial aid award — families are not required to make the assigned contribution. In fact, many families may be unable to meet their EFC.

A number of studies analyzing parents' actual financial contributions relative to EFCs in the 1960s and 1970s indicate a slight downward trend in family contribution, with significant differences by income. Boyd and Fenske (1976, as cited

Ultimately parents may decide to contribute a **certain amount of resources** toward their children's postsecondary education.

Family income appears to **affect strongly** the type of school attended and the extent of assistance required from parents.

in Barks, 1979) discovered that the percentage of the expected contribution actually provided decreased steadily from 1968 through 1974 for both high ability and average students. They attributed the trend primarily to alternative sources of student income — particularly employment during school and academic scholarships — and the desire of students to gain financial independence. After examining data from 1967 through 1977, Gregory Jackson (1980) concluded that "the dependence of students on parents for college financing has, if anything, declined" (p. 630). He argued that this decline was associated with three factors: students received more grants; they worked more, and they chose more often to attend subsidized (public) colleges. Another study, by Jeffrey Barks (1979), indicated that parents with lower gross incomes and relatively low adjusted available incomes appeared to contribute approximately what is expected of them, whereas parents with higher gross incomes fell into categories of those who under-contributed and those who over-contributed. Barks also cited a College Scholarship Service study conducted in 1972-73, which revealed that 38 percent of parents were contributing at levels less than expected, 24 percent at the expected levels, and 38 percent at levels greater than expected (Nelson, 1978).

A 1992 NCES report (Choy, Henke, and Schmitt, 1992) used data from 1986-87 to explore the ratios of gifts and loans to estimated family contributions, sorted by various family and institutional characteristics. It found that 40 percent of all students received less than three-fourths of the amount of their calculated EFC from their parents; 22 percent received from 75 percent to 124 percent, and 38 percent received 125 percent or more. Although the data are not completely comparable to those of prior studies, this study appears to suggest that actual parent contributions as a proportion of expected contributions may have leveled off in the 1980s.

Finally, parents' financial burden can be compared to the burden on non-family sources such as institutions and governments. A 1993 study found that the family's share of total college support had varied considerably between 1950 and 1990 — usually inversely to changes in federal outlays for higher education. The family's portion increased during the periods 1950 to 1965 and 1975 to 1985, while growing from an average of 30 percent of the total price in 1950 to nearly 50 percent in 1990 (Hauptman and Roose, 1993). Although available data do not allow a clear examination of the composition of the family's share, it appears that students' portion may be increasing relative to parents' share.

Family characteristics

A number of studies have looked at the characteristics of parents and students that might explain the extent and methods of their financial support for college. Two of the most frequently examined parental characteristics are income and parent educational levels. Although students' ability to attend and pay for college is often closely related to the experience and knowledge of their parents, students also carry with them their own set of characteristics, related to their abilities, their aspirations, and their efforts to help pay for college with financial aid and their own contributions. Similarly, the choice of institutions can be characterized by factors such as whether they are two- or four-year institutions, public or private, and close to or far from the family's home.

Family income appears to affect strongly the type of school attended and the extent of assistance required from parents. Examination of NPSAS:87 data (Choy, Henke, and Schmitt, 1992) indicates that both the percentage of students receiving parental financial support and the level of that support

uniformly increased as parent income increased.[8] Furthermore, in 1992-93, "50 percent of low-income, dependent undergraduates who attended full-time for the full year received money from their parents" (p. 37). In contrast, 78 percent of their counterparts who were not from low-income families received money from their parents, receiving on average about twice as much as the low-income students (Choy, Premo, and Carroll, 1996). (See Table 6, p. 55.)

Studies also have found parents' education levels to influence both the school attended and the method of financing. Flint (1993), for example, found parental education to be strongly associated with aspirations for a higher degree (for example, bachelor's over associate's, and master's over bachelor's) and modestly associated with greater knowledge of and intent to apply for college grants and other sources of support — both of which, in turn, were associated with higher-tuition schools.

Taking a different perspective, Flint (1997) later found that the most decisive factor determining the financing plan of a dependent student is, in fact, the college financing experience of the parents. In his analysis, as much as half of the variance in actual parent financial contributions was explained by measures of the parents' own methods of paying for their college expenses, "their education and income levels, and their efforts to prepare for their children's future through such specific behaviors as starting a savings plan ..." (p. 338).

Student characteristics, such as gender, may also impact parental involvement. While Flint (1997) — like the 1992 NCES study — concluded that the gender of the student was an insignificant factor in the determination of parental financial assistance, Davis (1977) found that there were significant gender-related differences in the total resources available to pay college costs, in the amounts and percentages derived from different sources, and in the way financial aid is distributed among students. In particular, the study found that contributions to women represented significantly greater percentages of parents' total resources than did the contributions to men.

In examining other student characteristics, Flint (1997) also found that the academic ability of students had no apparent independent influence on the money that parents provided; and children with aspirations for a higher degree received greater cash contributions from their parents, mediated by the parents' apparent willingness to find extra ways or tactics to raise funds for them.

In addition to such characteristics, students' own resources affect parental contributions; often, there appears to be a trade-off between student work income or financial aid and parental assistance. For example, a 1996 NCES study (Choy, Premo, and Carroll, 1996) found that in 1992-93, low-income students attending full-time for the full year who received less than $1,000 from their parents worked more while enrolled than those who received $1,000 or more. In addition, borrowing by the student was associated with lower parent contributions for full-time, full-year, low-income students.[9]

The NPSAS:87 data (Choy, Henke, and Schmitt, 1992) reveal several other relationships regarding parental assistance for dependent students:

- Younger students were more likely than older students to receive assistance.
- Parental contribution varied by race/ethnicity. For example, white students were more likely to receive gifts — and larger amounts — on average, than black students.
- First-year students received lower dollar amounts of gifts and loans than

Younger students were **more likely** than older students to receive assistance.

The percentages of students receiving **gifts or loans** from their parents increased with the total price of attendance.

continuing students (although this finding may reflect the inclusion of students in two-year programs within the sample).

- Students whose parents were married were more likely than those whose parents were single to receive gifts and loans, and they received more support, on average.

- Students who attended private, nonprofit institutions were more likely than students who attended public institutions to receive gift or loan contributions from their parents. In general, the percentages of students receiving gifts or loans from their parents increased with the total price of attendance.

Meeting the financial commitment

In order to see the full picture of parental involvement, it is important to explore not only the method by which parents distribute funds to their children, but how the funds are obtained by the parent — from loans, from savings, from current income, or from the sale of assets.

Choy, Henke, and Schmitt (1992) examined the various sources of funds used by parents to make contributions to their child's postsecondary education. Among the dependent students who received gifts or loans from their parents, more than three-quarters had parents who used current income for the contributions, and 65 percent had parents who used previously saved funds. Far smaller percentages had parents who assumed loans (24 percent) or took on additional work (30 percent). Overall, 42 percent of all dependent students had parents who saved to help them with their postsecondary education, whereas only 14 percent had parents who assumed one or more types of loans.

With respect to these sources of funds, various studies reveal a dichotomy between intention and reality. A 1997 study by Miller (reporting the results of the previously mentioned Gallup survey) indicated that only one-third of the parents of students entering the 10th grade named current income as a college financing source. In fact, current income was not even among the top three sources chosen by parents when read a list of potential sources of college funding. Their top three responses were their savings, grants/scholarships, and loans. Yet, Miller notes that fewer than two in 10 parents with college-bound high school graduates indicated in the Gallup survey that they had saved at least half of the price of their children's education with, at most, three years to save prior to their children's enrollment in college. For younger and less affluent parents, the percentage who had saved was even lower.

CHARACTERISTICS AFFECTING PARENTAL ROLES

From the findings of the available literature, we expect that the role of parents in their children's postsecondary education is affected by the nature and price of the educational institution, the socioeconomic circumstances of the parents, other burdens faced by the parents, the aspirations and abilities of the student, and other financial resources available to the student. Additional factors, such as race/ethnicity and gender are also worthy of further investigation. This report explores the impact of all of these characteristics, which are noted in the following table along with their expected association with parental involvement.

Each of these characteristics appears to be tied into the various mechanisms of the student/parent decision-making process. Some of these characteristics reflect similar influences — for example, attending a private institution, attending a four-year school, or enrolling on a full-time basis all imply a higher price of attendance. Yet all of them should be examined regarding their role in the decision-making process, despite the difficulty of capturing their individual influences in a statistical model.

Characteristics that May Affect Parental Behavior

Parental Characteristics	Student Characteristics	Institutional Characteristics
Parental gross income, wealth or earnings. Parents with relatively higher incomes are more likely to contribute, and at greater amounts.[10] It is also expected that they would use current income and savings to pay for their support.[11]	***Year in school.*** First-year and second-year students may be expected to receive more financial support from their parents, as parents have finite resources from which to draw over the total time in school. However, NCES found lower average support in the first two years, probably reflecting the lower prices at two-year colleges.	***Price of attendance.*** Parents of children who attend relatively expensive institutions or who live away from home are more likely to contribute more because of the larger gap between financial aid and other resources and the total price of attendance.
Age of oldest parent. Relatively older parents may have accumulated more wealth and may therefore contribute more. But parents who have come close to retirement age may be reluctant to dip into their savings.	***Attendance status.*** Primarily due to the fact that their total education-related expenses are higher, one would expect full-time students to receive greater contributions from their parents than part-time students.	***Institutional type.*** The amount contributed by parents is likely to differ by the type of institution their children attend, primarily because institutions vary widely in their tuition and fee structures.
Number of dependents. Having more children, particularly more children who are enrolled in college, tends to diffuse the amount of parents' resources that can be directed toward any one child.	***Gender.*** Although research is inconclusive, there may be gender-related differences in parental giving. For example, parents may contribute more money to their daughters than to their sons.	
Parental marital status. Married parents are likely to have more financial resources and time to devote to planning and financing their children's postsecondary education than single, separated, or divorced parents.	***Race/ethnicity.*** There also may be differences in parental contributions and debt patterns between whites and minority groups, in the sense that minorities may be less likely to contribute money or take on debt.[12]	
Parents' highest education level. Parents with higher education levels tend to have higher incomes and may contribute more. In addition, parents who have been through college can use their knowledge to assist their children prior to enrollment.	***Expected degree.*** One would expect that students with aspirations for a higher degree — in other words, bachelor's over associate's, or master's over bachelor's — would receive more support from their parents, in terms of both money and time.	
	Other sources of income or assistance. Non-family resources available to the student, such as work income and financial aid, will affect the amount contributed by the parents.[13] Receiving these resources is likely to be associated with lower parent contributions, and is also closely related with family income and the type of institution attended.	

Parents with **relatively higher incomes** are more likely to contribute, and at greater amounts.

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Parents are involved in **many aspects** of their children's transition from high school to college.

EXAMINATION OF NCES DATA

The Department of Education's National Center for Education Statistics (NCES) collects a number of data sets that have variables relevant to the role of parents. Two data sets are used here.[14] The National Education Longitudinal Study (NELS) provides trend data on 1988 eighth-graders through their transition into college or work, including the most recent follow-up in 1994. This analysis focuses on the parents of children who were enrolled in any postsecondary institution in October 1992 — the fall directly after high school graduation. The National Postsecondary Student Aid Study (NPSAS) describes a cross-section of postsecondary students in a certain academic year, with particular attention given to financial aid. Using the NPSAS data sets, information is drawn regarding parental contributions for financially dependent undergraduates. The report focuses on data from the 1992-93 NPSAS study, using 1986-87 for comparison purposes.[15]

FINDINGS

Descriptive statistics are presented below regarding various aspects of the parents' role, including their involvement prior to enrollment, their financial support, and the sources they draw from for that support. Parents' financial support is also measured relative to parents' expected level of contributions and the average price of attendance their children must pay. To supplement these statistics, the relationship between the amounts of gifts and loans that parents provide to their children and potential explanatory variables are analyzed, through both simple correlation and regression analyses.

Pre-college role

Parents are involved in many aspects of their children's transition from high school to college. The NELS data reveal that parents with children who were enrolled at a postsecondary institution in October 1992 tended to have been highly involved in the activities preceding college enrollment.[16]

- Parents were apt to have encouraged their children to complete the necessary "pipeline" steps to enrollment in a four-year institution: aspiring to a bachelor's degree, being prepared academically, taking entrance exams, completing an application, and enrolling (as defined in Horn, 1997). For example, 77 percent of parents had expected their children to earn a bachelor's degree or higher from the time their children were in eighth grade. Seventy-nine percent encouraged their children to prepare for the SAT examination, and 88 percent talked about the college application process often.

- Most parents had talked in general about college — including 83 percent of those whose children later enrolled — and an even larger percentage (92 percent) spoke to their children about a particular school.

Parents also had assisted their children in acquiring information about financial aid. Overwhelming majorities of parents whose children enrolled in college had used information on financial aid and discussed financial aid with at least one person in an official capacity. Sixty percent had spoken with a college representative; 55 percent had discussed aid with a high school guidance counse-

lor; and 26 percent had spoken with a loan officer.

Fifty-nine percent of parents whose children later enrolled in college had applied for financial aid. In terms of financial aid, more parents had expected their children would make use of grants (69 percent) than student loans (52 percent) to finance their higher education.

Direct contributions from parents to their children

Undergraduates who are financially dependent frequently receive assistance from their parents in addition to any financial aid they might receive or income they might earn.[17] This assistance may come in the form of gifts, loans, or non-monetary contributions, defined according to the NCES framework cited previously (Choy, Henke, and Schmitt, 1992). Gifts are non-repayable grants from parents; personal loans from parents are dollars that must be repaid by the student; and non-monetary contributions are non-cash items such as housing, clothing, and transportation provided by parents. Of these types, non-monetary contributions and gifts were the most common by far according to the NPSAS data sets. (See Table 7, p. 55.)

- Over 80 percent of the parents of dependent students reported giving them at least some non-monetary contributions in 1992-93, approximately the same proportion that had provided such contributions in 1986-87. Given the difficulty of attaching a value to such non-cash items, the average amount was not available for 1992-93.

- A slightly lower percentage of students, 66 percent, reported receiving gifts from their parents in 1992-93, with an average amount of $4,535 for those who received gifts. Although the proportion of dependent undergraduates receiving gifts was about the same as in 1986-87, the average amount received represented an increase of 16 percent (but a decrease of 9 percent when adjusted for inflation).

The percentage of dependent undergraduates who received gifts from their parents and the average amounts received in 1992-93 differed according to specific characteristics of the students, the parents, and the institutions attended.

- For example, the percentage of students receiving gifts tended to vary positively with students' expected degrees, parents' income and education levels, and the total price of attendance at a particular institution.[18] Only 41 percent of students whose parents' income was less than $12,000 received gifts, compared with 87 percent of students whose parents earned $100,000 or more.

- The average amount of gifts received tended to vary positively with the same characteristics as above. Thus, students whose annual price of attendance was $1,500 to $2,999 received $2,094 on average in gifts from their parents in 1992-93, compared with the $8,022 received by students whose total price was $10,000 or more.

Fewer dependent undergraduates reported receiving personal loans from their parents compared to gifts or non-monetary contributions.

- In 1992-93, 12 percent of dependent undergraduates received an average of $2,358 in loans from their parents. These figures are similar to those in 1986-87.

Fewer dependent undergraduates reported receiving **personal loans** from their parents compared to gifts or non-monetary contributions.

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Parents who had higher incomes, who had higher education levels, **whose children attended high-priced schools,** and whose children aspired to advanced degrees tended to provide higher amounts of gifts to their children.

The proportion of dependent undergraduates who reported receiving loans from their parents in 1992-93 did not differ greatly by most student, parent, or institutional characteristics. However, the average amount of loans received varied positively with the same characteristics as did the average amount of gifts — students' expected degrees, parents' income and education levels, and total price of attendance — although not necessarily to the same extent. For example, dependent undergraduates with parents whose highest education level was high school or less received an average of $2,036 in loans from their parents, compared with the $3,596 received by students whose parents' highest education level was an advanced degree (master's, Ph.D., or professional).

Regression analysis of parental financial assistance

Simple correlation between a pair of variables does not necessarily imply causation. For example, although higher parents' education levels are associated with larger gift amounts, higher parents' education levels do not necessarily cause a greater contribution. In fact, the two variables may be more meaningfully related through other factors; in the previous example, parents' education levels may be manifested through other characteristics, such as household income. Thus, multiple regression analysis was performed on the NPSAS:93 data to help explain the influence of specific characteristics on the variation in gift and loan amounts, holding all other variables constant.[19]

Prior to the regression analysis, correlations were run between gift and loan amounts on the one hand, and various characteristics on the other, in order to determine the strongest relationships among the variables.[20]

- Total price of attendance, parent income, parents' highest education level (bachelor's degree or higher), and to some extent student aspirations for an advanced degree (master's, Ph.D., professional) were associated with gift amounts. Thus, parents who had higher incomes, who had higher education levels, whose children attended high-priced schools, and whose children aspired to advanced degrees tended to provide higher amounts of gifts to their children than other parents.

- Total price of attendance and parent income was related to loan amounts — parents with higher incomes and whose children attended high-priced institutions were relatively likely to provide greater amounts of loans to their children. To a lesser extent, total student aid received, parents' age, parents' highest education level (bachelor's degree or higher), student aspirations (greater than a bachelor's degree), and student class level (third year) also were positively correlated. Minority status was negatively correlated — parents of minority students were less likely to provide high loan amounts to their children.

Correlations also were run among the characteristics themselves. More than one characteristic may capture some of the same influences, and they would therefore affect gift and loan amounts in similar ways. Of particular interest are the following:

- Parent income was related to minority status, parents' marital status, and parents' highest education level.

- The total annual price of attendance was associated with institutional control and level, students' atten-

dance patterns, total student aid received, and students' aspirations for an advanced degree (master's, Ph.D., or professional).

- Parent income and total price of attendance were also positively correlated with each other.

Multiple regression analysis was then performed using the characteristics that apparently have the strongest relationships with gift and loan amounts.[21] Because regression analysis attempts to identify the relationships among variables, some of these characteristics were omitted from the final models. Their influence was better captured by similar variables — for example, parents' education level and income. Other characteristics, which previously had not shown strong relationships, were included in the models after all factors were considered. These changes were caused by the fact that many variables are alternative explanations for the same influence. For example, as seen in the simple correlations, parent income, total student aid received, parents' education levels, and minority status affect the variation in loan amounts in similar ways. In this case, parent income ultimately revealed itself as the strongest influence among the interactions, and the other variables were omitted. The results of the final models are the following:

- After accounting for all other interrelationships through regression analysis, only college price, parent income level, and the age of the oldest parent could be said unambiguously to "explain" the variation in loan amounts. Together, these characteristics explained 17.7 percent of the variability in parents' loans to their children, a relatively low level of explanatory power.

- Regression analysis substantiated the expected relationships between gift amounts and parent income, total price of attendance, and the highest degree attained by a parent (bachelor's degree or higher). The amount of student aid also appeared to influence positively gift amounts. Altogether, 44.8 percent of the variation in gift amounts can be attributed to these factors. This result reveals a relatively low level of explanatory power, but a more satisfactory result than those dealing with personal loans.

The regression results are consistent with many of our hypotheses about which factors influence the level of parents' financial assistance to their children. However, it is significant that relatively few characteristics were effective in the final regression models in "explaining" the variation in gift and loan amounts, and much of the variation remained unexplained. This lack of explanatory power could have been caused by a number of factors. First, personal loan amounts constitute a small proportion of total parent financial assistance to their children; the small sample may be distorting the effects of the factors we identified. But the size of the sample should not be an issue for parental gifts. Second, influential variables may have been missed in this analysis, possibly because the data were not collected or defined appropriately. With the individual records, one could have examined the unexplained portions ("residuals") of the variation in gifts and loans to see if there was a pattern; the existence of a pattern would have suggested that important variables had been missed. On the other hand, the lack of a pattern would have suggested that the decision to provide a certain amount of financial assistance to one's children is highly individualized, and may not be able to be generalized by a statistical

Only college price, parent income level, and the **age of the oldest parent** could be said unambiguously to "explain" the variation in loan amounts.

The average price of attendance has been **increasing more rapidly** than have EFCs or parental contribution amounts.

model. These possibilities will be further explored in a later section, using data from The Institute survey.

Relative burden of parents' financial support

In addition to the amount of financial assistance parents provide to their children, it is important to examine the extent to which that assistance represents a financial burden. One way to measure this burden is to determine whether, on average, parents' actual contributions to their children differ substantially from their estimated contributions, as measured by EFCs. Another possibility is to investigate whether parents' annual financial contributions are covering a consistent proportion of their children's total annual price of attendance. These relationships can provide broader perspectives on parents' ability to pay as well as students' financial need.

The average EFCs of families in which the student received either a gift or a loan from the parent were calculated from the NPSAS data and compared with the average amounts of gifts and loans parents gave to their dependent children in a specific year. This comparison revealed the following ratios between average gift/loan amounts and EFCs. (See Table 8, p. 56.)

- In 1992-93, the average gift amount was approximately 44 percent of the average composite EFC, which includes estimated contributions for both parents and students. This amount was only slightly higher than the 41 percent in 1986-87. Meanwhile, the average loan amount from parents also constituted a relatively flat proportion of the average composite EFC — 23 percent in 1992-93, and 29 percent in 1986-87.

- In NPSAS:93, the estimated parental contribution (EPC) — which includes only the parent portion of the composite EFC and therefore provides a more relevant comparison to actual parent contributions — can be separated out. The average gift amount was 62 percent of the average EPC in 1992-93; the average loan amount was 32 percent in that year.

Because parents did not necessarily provide both gifts and loans to their children, we cannot add the gift and loan amounts together to come up with a total contribution amount. Thus, a total ratio of actual parent contributions to estimated contributions cannot be calculated. Nevertheless, one can reasonably conclude from these data that, on average, actual parent contributions to their children are slightly lower than the parent portion of the EFCs. One should remember, however, that these calculations do not include the value of parents' non-monetary contributions to their children.

The average price of attendance has been increasing more rapidly than have EFCs or parental contribution amounts over this time period. As a result, parents' financial assistance to their children, despite increasing in absolute terms, appears to be covering a declining proportion of college prices. To see this gap, the NPSAS data were used to calculate the average annual price of attending a postsecondary institution for families in which the student received either a gift or a loan. Comparison of average gift and loan amounts to the average price of attendance revealed the following ratios. (See Table 9, p. 56.)

- In 1986-87, average gift amounts covered 69 percent of the average price of attendance; by 1992-93, this figure was 52 percent.

- At the same time, despite significant increases in parents' loans to their

children, the average loan amount covered decreasing percentages of the average price of attendance: 48 percent in 1986-87, but only 27 percent in 1992-93.

These trends have resulted from the fact that the average amounts of gifts and loans have not increased at a rate fast enough to match the escalating price of attending a postsecondary institution. Whether the failure of parents' financial contributions to match price increases is a result of parents' inability or their unwillingness is unclear.

Parents' sources of funds

Parents who help their children pay for postsecondary education can draw upon various resources, including their current income, their savings, loans from government or the private sector, and additional work. However, parents use these sources differently, depending on their financial and employment circumstances. For example, some parents may have less access to credit and may not be able to save as a result of lower-paying jobs (Choy, Henke, and Schmitt, 1992). At the same time, the amount of financial support students need from their parents varies considerably, depending on the type of institution they attend, the amount of financial aid they receive, and the amount of money students contribute themselves. These factors also affect the decision about which source or sources parents will turn to for funds.

A preliminary look at these relationships shows how frequently parents appear to utilize various sources and how this usage differs according to certain characteristics:

- For parents who gave gifts or loans to their children, current income was the most commonly used source of funds: in the 1992-93 academic year, 60 percent used income from their regular jobs. Savings, money markets funds, and certificates of deposit were the next most common source, used by 48 percent of parents; in addition, 13 percent used retirement funds, and 3 percent used trust fund money. Substantial proportions of parents used additional work, with 16 percent working more hours and 15 percent taking on an extra job. On average, fewer parents used loans as a source of funds — 9 percent used money from home equity loans, lines-of-credit, or other loans, and 6 percent refinanced real estate.[22]

- To some extent, the sources of funds used by parents who gave gifts or loans to their children in 1992-93 varied according to specific characteristics. Parents with higher income or education levels, as well as those whose children were attending higher-priced institutions, were more likely to use current income, savings, and loans than parents with lower income and education levels or with children at less expensive colleges. On the other hand, parents of students at lower-priced schools were more likely to take on additional work than were parents of students at more expensive institutions. Finally, parents' use of savings varied inversely to the amount of financial aid received by the student.

- Of the parents of all dependent undergraduates — regardless of whether they gave gifts or loans to their children — 65 percent reported having cash and savings in 1992-93. For those who did, the average amount they reported was $9,944. Data regarding the proportion of all parents who used their savings to provide financial assistance to their children were unavailable.

Parents' use of savings **varied inversely** to the amount of financial aid received by the student.

Despite the low percentage of parents who **are borrowing,** the average amounts appear to be increasing rapidly.

- Borrowed funds were used infrequently by parents of all dependent undergraduates. Only 8 percent used loans — including federal PLUS loans, home equity loans, and school-sponsored parent loans — to help finance their children's postsecondary education expenses in 1992-93. Parents who borrowed funds in that year took out an average amount of $9,126, including all types of loans.

- Parents of undergraduates who had expectations of a higher degree (such as a master's degree), received higher amounts of student financial aid, and had a relatively high price of attendance were more likely to use loans to finance contributions to their children's postsecondary education in 1992-93 than were parents of undergraduates with aspirations for a lower degree (such as an associate's degree), less financial aid, and a lower price of attendance. For example, only 1 percent of parents whose children had a total price of attendance of less than $1,500 per year used any kind of loan, compared with 14 percent of those whose children had prices of $10,000 or more.

- Despite the low percentage of parents who are borrowing, the average amounts appear to be increasing rapidly; for example, average annual amounts for parents who used PLUS loans increased from $2,387 in 1986-87 to $3,375 in 1992-93. The average amounts borrowed for all loans varied — parents with high income or education levels, those whose children received low amounts of financial aid, and those whose children attended relatively expensive institutions tended to borrow more money to finance contributions to their children's education.

THE INSTITUTE SURVEY OF PARENTS

Although the NCES data sets provide considerable insight into the role of parents in college selection and financing, they have some shortcomings. Perhaps most important, without individual responses it was difficult to draw definitive conclusions, especially from regression analysis. Furthermore, the data collected do not fully address all of the questions posed in this report. Thus, The Institute for Higher Education Policy commissioned a nationally representative survey of parents of current college students to gather information relevant to this report. The Institute survey data provide a better opportunity to examine interrelationships between variables because the analysis can focus on the responses of individual respondents rather than on aggregates and averages.

Survey design

The Institute survey was administered by telephone during June and July of 1998. The total survey sample was 750 parents with at least one dependent child enrolled in college during the 1997-98 academic year. If the respondent had more than one child in college, he/she was asked to focus on the oldest child for the majority of the survey questions. Due to the nature of the survey, the sample under-represents the proportion of the dependent student population in general that attend two-year institutions or enroll on a part-time basis. Thus, The Institute survey results should be interpreted as

generally reflecting parents of dependent undergraduates who attend four-year institutions on a full-time basis.[23] (See Table 10, p. 57 for sample demographics.)

FINDINGS

Descriptive statistics on various aspects of the survey results are highlighted below, including parents' involvement prior to enrollment, their financial assistance for their children's higher education, and the sources they draw from for that assistance. Parents' financial support is also measured relative to the average price of attendance their children must pay. Regression analysis of the interrelationships between parents' behavior and potential explanatory variables is presented in the subsequent section.

Pre-college role

In comparison with the NELS data, The Institute survey results reflect slightly different aspects of parental involvement prior to enrollment. In particular, because the respondents were asked about their actions prior to their children's enrollment, they are relying on memories that may be as long as five years old, rather than describing current experiences. Nevertheless, The Institute survey results appear to be consistent with the circumstances portrayed by the NELS data.

Virtually all parents — 94 percent — reported that while their children were in high school, they had expected them to achieve at least a bachelor's degree or higher in college. In addition, most parents were involved in various aspects of the college admissions and financial aid processes prior to their children's enrollment in college.

- Of all survey respondents, 83 percent had discussed their children's interests in degrees or careers with them; 72 percent helped with filling out applications; 65 percent gave advice in choosing schools to apply to; 57 percent spoke with an admissions officer; and 50 percent helped decide which college their children would attend. Only 6 percent of parents did not participate in any of these parts of the admissions process.

- Almost two-thirds of parents (63 percent) had children who applied for financial aid prior to their first year of college. The proportions varied depending on the parents' income and the type of institution the children attended — low-income parents (also reflected in race/ethnicity and parents' education) were more likely to say that their children had applied for financial aid, as were parents whose children subsequently enrolled at private institutions or paid relatively higher tuitions.[25]

- Parents whose children applied for financial aid were involved in many aspects of the process. 84 percent helped fill out financial aid application forms; 80 percent obtained aid information for their children; 52 percent spoke with a financial aid officer; 49 percent spoke with a guidance counselor. Fewer than 10 percent did not participate in any of these activities.

Preparing for college also entails laying out a financial strategy, which may or may not include assistance from parents. Although survey respondents differed in the amount of direct support they had promised to their children prior to enrollment in college, virtually all of them promised at least some financial assistance.

- Almost half of all respondents (49 percent) promised to pay most or all of their children's college expenses, while an additional 42 percent promised to

Parents whose children **applied for financial aid** were involved in many aspects of the process.

Almost one-third of parents **planned to borrow money** to pay for educational expenses.

pay some of the costs. Parents with higher incomes, higher levels of education, and those whose children did not apply for financial aid were more likely to promise to pay most or all of the costs than parents with lower incomes or education levels and those with children who had applied for financial aid.

- To meet these promises, almost one-third of parents — 31 percent — planned to borrow money to pay for educational expenses. Approximately a third of these did not know how much money they had planned to borrow; of those who did know, the average amount they planned to borrow was $10,380.

Direct contributions from parents to their children

Most parents followed through on their promises and gave their children contributions toward tuition, housing, or other educational expenses during the most recent school year, 1997-98. Only 6 percent of parents did not contribute. However, the form of their contributions varied.

- The most common forms of support were non-monetary contributions and gifts, which were given by 78 percent and 77 percent of parents, respectively. Only 8 percent of parents gave loans to their children for educational expenses.

- The provision of non-monetary contributions and loans did not vary much by demographic or institutional characteristics; however, the provision of gifts tended to be more common among parents with higher incomes or educational levels, and among those whose children attended private institutions or relatively expensive schools.

- Among those who gave gifts to their children, the average annual gift amount was $6,073; the median amount was $4,000. On average, students who did not receive financial aid received larger gift amounts than students who did — $6,934 compared with $5,901. Students who attended high-priced institutions also tended to receive higher average gift amounts — for example, those with tuitions of more than $20,000 received $12,906 from their parents on average, compared with the $3,244 received by students with tuitions of $1,001 to $2,000. Other differences are presented in Table 11 presented on page 58.

- Among parents who gave loans to their children, the average annual amount was $3,983, while the median amount was $3,000. Because so few parents give loans to their children, it is difficult to ascertain how the average loan amounts vary according to specific characteristics. Nevertheless, it appears that parents from minority groups tended to make much lower loan amounts to their children than did white parents — $900, on average, compared with $4,150. (See Table 12, p. 58.)

Some parents attached conditions, rules, or other requirements to their contributions. For example, 24 percent of parents who contributed to their children's educational expenses required that their children maintain a specific grade point average; 9 percent asked that their children try their best; and 7 percent required their children to earn a degree. However, the majority of parents did not attach any conditions to their contributions.

Another option for parents is to help repay a portion of the student loans taken out by their children. Seventeen percent

of parents whose children had already taken out student loans were currently repaying a portion of those loans. One-third of all parents considered it likely that they would help repay such loans in the future.

Overall, parents appear willing to continue their current levels of financial support.

- Of those parents whose children had not yet graduated, 76 percent reported that they were very likely to continue to support the student during future academic years.

- Parents were also likely to report approximately the same levels of involvement when they had more than one dependent child enrolled in college. Eighty-three percent reported the same level of involvement in precollege activities; 74 percent reported the same level of financial support; and 82 percent reported a similar likelihood of repaying a portion of the second child's student loans.

Relative burden of parents' financial support

As mentioned in the NCES data section, it is important to put parents' financial contributions into perspective by comparing them to either the estimated family contributions (EFCs) or the average price of attendance their children must pay. Because federally calculated EFCs are complicated and require a greater amount of data than was solicited in the survey, we did not attempt to replicate them from the responses. However, we did examine how much of students' annual price of attendance is covered by the annual amount of funding they receive from their parents.[26] With individual records, we were able to combine gift and loan amounts (if the parents made such contributions to their children) into a measure of "total contribution." Comparisons of the amounts of parental assistance and the average price of attendance revealed the following ratios:

- For those parents who gave gifts or loans to their children, gift amounts as a proportion of total price of attendance averaged 55 percent, while loan amounts averaged 33 percent. The average total contribution was 57 percent of total price of attendance.

- For all parents — including those who did not give gifts or loans to their children — the total contribution as a proportion of the total price of attendance averaged 37 percent.

The latter proportion varied significantly depending on certain characteristics. For instance, the average ratio was higher for parents of students who did not use financial aid — 45 percent, compared with 29 percent for those whose children received financial aid. (Other differences are presented in Table 13 on page 59.) Taken together, they suggest that parents with a higher socioeconomic status may be contributing a higher percentage of the price of attendance to their children.

Parents' sources of funds

Parents obtained funds from a variety of sources in order to pay for their cumulative financial contributions to their children's higher education. Current income was the most common source, followed by savings, borrowed funds, and other sources such as extra work, relatives and trust funds.[27] In the aggregate, parents tended to use each source to cover about half of their total contributions to their children. This aggregate effect occurs even though each respondent seldom divided the sources evenly between two types.[28] (See Table 14, p. 59.)

At the same time, the average percentage for all parents — including those who

Parents reported the same **level of involvement** when they had more than one dependent child enrolled in college.

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Parents reported **saving** approximately $9,956 on average.

did not use that source, and reported zero percent — varied according to specific characteristics. In particular, parents with higher incomes and education levels and whose children attended higher-priced schools, tended to use their savings to cover more of the money they provided to their children. Parents whose children attended higher-priced institutions also tended to use borrowed funds to cover more of their contributions. (See Table 15, p. 60.)

The Institute survey also asked more specific questions of those parents who reported using their savings or borrowed funds to contribute to their children's postsecondary expenses. The responses reveal interesting patterns of cumulative saving and borrowing behavior, although so few respondents had borrowed money that the results should be interpreted with caution.

- About a quarter of parents who used their savings did not know how much they had saved prior to their children's enrollment; those who knew reported saving approximately $9,956 on average.

- Parents who had higher incomes, who had higher education levels, who were ages 45 to 54, whose children attended private schools, and whose children did not use financial aid in college tended to have saved more money prior to enrollment. Parents from minority groups and parents with more children tended to have saved less.[29]

- Parents also reported starting early in saving for their children's educational expenses — 57 percent reported starting their saving when their children were in elementary school or earlier.

- The most frequent source of cumulative borrowed funds was federal PLUS loans, which were used by 44 percent of those who borrowed, followed by second mortgages (17 percent), state loans (14 percent), and institutional loans (11 percent). In total, parents who used loan funds reported borrowing $14,077 on average.

- Parents who had higher incomes, who were married, whose children were in their third year of college or higher, whose children lived at school, and whose children attended high-tuition schools tended to borrow more money. Parents from minority groups appeared to borrow less, on average, than white parents.[30]

As would be expected, the survey data indicate that the more parents saved prior to their children's enrollment in college, the less they tended to use current income to cover the financial assistance they provided to their children. Similarly, parents who started saving earlier — and therefore were more likely to save a larger amount — tended to use current income less. For example, 38 percent of parents who started saving before their children were in elementary school reported not using current income at all, compared to 26 percent of parents who started saving in high school.[31] What cannot be ascertained from the existing data is the extent to which students cancel or delay their college attendance, or shift to less expensive college alternatives because of parents' failure to save.

In addition to the source of funds, The Institute survey explored several other aspects of the ways in which parents contribute to their children's educational expenses. For example, a significant minority of parents — 37 percent — have used credit cards to pay for education-

related expenses. Thirty percent have used credit cards to pay for books and supplies; 15 percent have charged routine living expenses for their children; 14 percent have charged tuition and fees; and 7 percent have charged room and board costs. Furthermore, substantial proportions of parents have made lifestyle changes in order to contribute to their children's college costs, including cutting back on entertainment expenses (40 percent), putting off major purchases (39 percent), skipping vacations (32 percent), and working more hours (25 percent).

Regression analysis of survey results

As with the NCES data, The Institute survey responses pointed to strong correlations between parental behavior and various demographic and institutional characteristics. Determining the extent or nature of these relationships when accounting for the interrelationships between variables is important because experience suggests that many of these variables capture similar influences; for example, the influence of such characteristics as race/ethnicity and parents' marital status is likely reflected in parent income levels. Consequently, we examined relationships between behavioral variables (such as parents' financial contributions to their children) and characteristics that might impact those variables (such as parent income and education levels) through simple correlations. Then, using multiple regression analysis, we explored the influence of significant characteristics on various behavioral variables. The results are summarized below.[32]

A number of factors were highly correlated with parents' financial assistance (as measured by their total contributions to their children's postsecondary education) while others were not:

- The variables with the strongest association were household income, the total amount of family savings for education, and the price of college. Thus, parents who had high levels of income, who had large amounts of savings, and whose children attended high-price schools were more likely to provide greater amounts of financial support.

- Other strong correlations existed as well: parents who had higher education levels, who were married, who were white, who had expectations for a higher degree for their children, and whose children attended private or out-of-state schools tended to provide larger amounts of financial assistance.

- Factors that characterized the student by gender, academic ability, or year in school had only a slight relationship with parental financial assistance.

- A significant relationship between parents' total contributions to their children and the source of funds for those contributions (borrowed funds, current income, savings, or other source) was not found.

Many of the characteristics noted above were operating primarily through the price of college and income categories. Once the interrelationships among these variables were resolved through regression analysis, some of the factors were found to contribute little explanatory power. The most important of these was the amount of parents' savings, which had appeared to have a strong correlation with parental financial assistance; other characteristics that became insignificant include parents' education, race/ethnicity, and institutional type. Ultimately, the total price of attendance and parent's household income were the most significant explanatory variables by far. These two variables explained 29.7 percent of the variance in

A number of factors were **highly correlated** with parents' financial assistance.

The parent/ student **decision-making process** is a unique and personal one.

total contributions by parents to their children. In comparison, all of the variables in the model combined explained 32.1 percent of the variation. These variables included not only price and income, but also the following: parents' highest education level, age, marital status, expected degree for their children, race/ethnicity, and number of dependents; students' year in school, gender, class rank, and residence status (at home or at school); and institutional control (public or private), level (two-year or four-year), and location (in state or out of state).

This is not to say that the other characteristics do not have influences at another level. If college price and income were to be omitted from the model, for example, the remaining variables would explain 12.3 percent of the variation in parental financial support. However, each is so intimately associated with household income or college price that their effects are to a large extent incorporated by the effects of the income and price variables in the above model. In addition, the total price of attendance reflects the choice of institution, which is predicated upon a number of family characteristics — some of which do not necessarily show up in the regression models.

One example of an indirect effect revolves around parents' savings. Although the amount of parents' savings alone does not appear to explain the variation in the total amount of parental assistance, savings does have an impact at another level: the proportion of savings relative to household income. If the ratio of savings to income is added to the model as an independent variable, it explains an additional 3.9 percent of the variation in parents' total contributions (the dependent variable). This ratio may be interpreted as a measure of "effort." In other words, given a certain price of attending college, parents who save a greater proportion of their annual income tend to provide their children with a greater level of financial assistance. Because it reflects effort rather than amount, this finding suggests that parents who give high priority to higher education in their family decisions are willing to support their children to a greater extent.

Regression analyses also were performed on several other parental behavior variables, including the amount of parental savings, the total contribution relative to college price, and the form of the contribution (gift, loan, or non-monetary contribution). In every case, the price of attendance and parent income are the two dominant explanatory influences.

The results of these regression analyses generally confirm those discovered by analysis of the NCES data (as well as earlier studies); in particular, they have emphasized the importance of household income and the price of attending a specific institution in the college financing decision-making process. What the analyses do not "explain" is equally important, given the breadth of student and parent characteristics that might be used to explain variation in parental behavior. As with the NCES data, each analysis of The Institute survey data has resulted in a significant percentage of variation that is left unexplained by the factors included in this report. But examination of this unexplained variation did not reveal any patterns and did not suggest any factors that were obviously missing from the analysis.

The best interpretation of the unexplained variation is that the parent/ student decision-making process is a unique and personal one, and that the complex interrelationship of student ability, family culture, parent and student expectations for future lifestyles, and economic circumstances are not easily captured by statistical techniques. It is

difficult to quantify attitudes: for example, parents might feel that one of their children is responsible enough to take on the burden of a student loan, or might be willing to pay more because they want their child to enter a public service-oriented job after college. In addition, the measurement of "effort" described above represents an attempt to highlight the priority parents attach to higher education. All in all, the individualized nature of these choices suggests that parents and students have real options to structure their financing decisions in the best possible manner for their family situation.

CONCLUSIONS

The results of the analyses of both the NCES data and the responses from The Institute survey of parents convey a comprehensive picture of the role of parents in college financing and enrollment.

The different analyses also revealed generally consistent findings and trends. They are reviewed below according to the components of the parent/student decision-making process.

COMPARISON OF THE FINDINGS

The pre-college role

Parents of students who enroll in college generally have high expectations for the degree their children will attain. In the NELS sample, 77 percent of parents whose children enrolled in college had expected them to earn a bachelor's degree or higher. Virtually all parents who responded to The Institute survey reported feeling the same way. Furthermore, both data sets revealed that parents of students who participate in postsecondary education were heavily involved in preparing for admission, selecting a particular institution, and planning a financial strategy. Approximately three-fifths of their children applied for financial aid (59 percent in NELS, 63 percent in The Institute survey), and parents participated widely in obtaining financial aid information and helping with the aid application. Parents also reported speaking with individuals who were knowledgeable about financial aid: approximately half spoke with guidance counselors in both data sets, while varying percentages of parents spoke with financial aid officers and loan officers. The Institute survey added to our knowledge about the parents' pre-college role in planning a financial strategy: almost all parents promised to pay *some* of the price of attending college, and nearly half promised to pay *most* or *all* of the costs. To keep their promises, almost one-third of parents planned to borrow money themselves.

Clearly, parents are widely involved in helping their children choose a postsecondary institution and in planning how to finance their educational expenses. Given the increasing importance of higher education to future earnings and lifestyles, it is not surprising that parents seek to help their children by applying their own experience and knowledge to the college decision-making process.

Direct contributions from parents to their children

According to both data sets, non-monetary contributions were the most common form of parents' support to their children while they were enrolled (80 percent in NPSAS:93 and 78 percent in

Almost all parents promised to pay **some** of the price of attending college, and nearly half promised to pay **most** or **all** of the costs.

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Parent income and the price of attendance are the two **predominant factors** influencing the levels of parents' financial assistance.

The Institute survey), followed by financial gifts (66 percent and 77 percent) and personal loans (12 percent and 8 percent). In addition, a substantial proportion of parents — one-third — felt they would help their children repay their student loans in the future.

Students who received gifts from their parents tended to receive more, on average, than those receiving loans: average gift amounts were about $3,900 in NPSAS:87, $4,500 in NPSAS:93 and $6,000 in The Institute survey, compared with average loan amounts of $2,700, $2,400 and $4,000, respectively. The average amounts of money contributed by parents to their children appear to be increasing only modestly over time. For example, the average gift amount increased by 16 percent between 1986-87 and 1992-93, but decreased by about 12 percent when inflation is taken into account. Meanwhile, the level of parents' financial assistance varied widely. Ultimately, parent income, the total price of attendance, parents' education levels, and total amount of financial aid received by the student were the most important characteristics influencing gift amounts in the NPSAS:93 sample; for the variation in loan amounts, parent income, total price of attendance, and to a lesser extent parents' age were the most important factors. In The Institute survey, parent income and total price of attendance alone were the most powerful explanatory factors influencing the variation in total contribution amounts.

Taken together, these findings suggest that parents are contributing slightly increasing amounts of money to their children for higher education, primarily in the form of gifts. It is also common for them to provide non-cash assistance, such as clothing, food, and medical care. Their levels of financial support vary depending on the unique circumstances of each family. It is clear that parent income and the price of attendance are the two predominant factors influencing the levels of parents' financial assistance to their children.

Relative burden of parents' financial support

From the NCES data, it appears that parents are contributing slightly less than what is expected of them by the financial aid process, at least at the aggregate level. In 1992-93, the average gift amount covered slightly more than 60 percent of the average parent portion of the federal EFC; the average loan amount covered approximately 30 percent. One can also conclude from the data that the average proportions of combined student and parent EFC remained relatively consistent over this time period — gift amounts from parents covered 41 percent of composite EFC in 1986-87 and 44 percent in 1992-93, while loan amounts covered 29 percent and 23 percent, respectively.

At the same time, the average price of attending a postsecondary institution has been increasing more rapidly than have average EFCs or parental contribution amounts. As a result, parents' financial assistance to their children — despite increasing in absolute terms — appears to be covering a declining proportion of college prices. According to the NPSAS data, in 1986-87 average gift amounts covered 69 percent of the total price for those parents who gave gifts or loans to their children, and 52 percent in 1992-93. Average loan amounts covered 48 percent of the total price in 1986-87 and 27 percent in 1992-93. Although The Institute survey results are not directly comparable, they are consistent with the trend: the average gift contribution as a proportion of total price of attendance averaged 55 percent, and the loan amounts averaged 33 percent. The failure of increases in the level of parents'

financial assistance to match the pace of escalating college prices may be due to a lack of capacity on the part of parents — for example, due to increased consumer debt, an apparent lack of savings, or the relatively slow growth of median family incomes — or to a lack of willingness.

The Institute survey results also allowed the calculation of total contributions from parents. Thus, the average total contribution was 37 percent of average price of attendance for all parents, including those who did not give financial support to their children. This ratio varied among families, and was particularly influenced by household income and — not surprising — the total price. In addition, a measure of parents' "effort" — the amount parents saved prior to enrollment as a proportion of their annual income — influenced the ratio of total contributions to total price to a lesser extent.

Parents' sources of funds

Both data sets indicated that current income was the most common source of funds for parents who gave financial assistance to their children — 60 percent in NPSAS:93 and 71 percent in The Institute survey — followed by savings (48 percent and 51 percent, respectively) and borrowed funds (about 9 percent and 24 percent).[33] Parents also worked extra hours, took on additional jobs, and found other sources for funding, such as contributions from relatives. There does not appear to be a relationship between the source of funds parents draw upon and the level of financial assistance they provide to their children.

The Institute survey suggested that a substantial proportion of parents who saved prior to college started early — elementary school or earlier. Of those who saved, the average amount that had been saved prior to their children's enrollment was approximately $10,000, an amount that would cover about 25 percent of the average price of attendance at a four-year college over four years. In general, parents who started saving earlier and who saved greater amounts of money were less likely to use current income to cover the financial assistance they provided to their children.

Furthermore, although relatively few parents borrow funds, the number appears to be increasing. In addition, the average amounts may be rising; the average amount borrowed was about $9,000 in 1992-93 but $14,000 in 1997-98. This conclusion is supported by Department of Education data, which reveal that the amounts of one type of parent loan, federal PLUS loans, are increasing rapidly — the average PLUS loan amount in the FFEL program more than doubled between Fiscal Years 1986 and 1996, from $2,634 to $5,944, respectively (Conner et al., 1997).

Significance of the findings

The analyses performed in this report have provided a comprehensive overview of the role of parents in their children's pursuit of higher education. Although the NCES data sets and The Institute survey are not strictly comparable, the findings have been quite consistent regarding parents' involvement in pre-college planning, the level of financial assistance to their children, and the sources of funding for that assistance. Several of these findings stand out as essential to our understanding of parents' role.

- Despite the fact that parents' financial assistance to their children appears to be modestly increasing, the dollar amounts are covering a diminishing proportion of the average price of attendance.

Most parents contribute a substantial share of the price of attendance to their children, and the average amounts of

Current income was the **most common source** of funds for parents who gave financial assistance to their children.

Most parents do not appear to be **going into debt to** provide financial assistance to their children, but those who do borrow are taking on increasing amounts.

parents' financial assistance are increasing only modestly over time. More important, however, the average price of attending a postsecondary institution has been increasing more rapidly than have parental contribution amounts. The average price of attendance (tuition, fees, room, and board) at a four-year institution rose by an average of 81 percent from 1986-87 to 1996-97, or 38 percent after accounting for inflation (NCES, 1997). As a result, parents' financial assistance to their children appears to be covering a declining proportion of college prices. In other words, parents may be providing more support to their children on average, but because prices are increasing so rapidly, the amounts cover a smaller proportion of the total price of going to college.

The fact that parents are not able to increase their financial contributions by an amount sufficient to keep up with college prices could be explained by many factors: increased consumer debt (such as credit cards) may have limited their available resources; they may have failed to start saving early enough; or their household incomes may not have grown in real terms. On the other hand, the lag may have been caused by a lack of willingness on the part of parents in proportion to the cost of education. Indeed, the widespread availability of student loans may have allowed them to avoid increasing their levels of financial assistance. Additional study is necessary to ascertain how the aggregate burden of higher education expenses is being shifted to the other groups (students, government, institutions) in the financing equation.

- Most parents do not appear to be going into debt to provide financial assistance to their children, but those who do borrow are taking on increasing amounts.

Parents provide financial assistance to their children from a limited set of resources: current income, savings, or borrowing. While most parents use a combination of such resources to help pay for college, current income is the most common resource, followed closely by savings. Loans appear to play a minor role as a resource for parents.

There are many possible reasons for this aversion to loans. Parents may not need to take out loans; they may not have access to credit; or they may be shifting the burden of debt to their children. As noted in this report, a substantial proportion of parents allow their children to take out lower-cost student loans, and promise to help them make the payments. Nevertheless, it is significant that for those who do borrow, average loan amounts have increased significantly in the 1990s. The average amount borrowed by parents increased from about $9,000 in 1992-93 to $14,000 in 1997-98, an increase of more than 50 percent in just five years. This trend suggests that the rapidly increasing price of higher education may be compelling some parents to borrow ever higher amounts of money.

- Parents may not be realistic about what they should expect to pay for college.

Despite strong support to assist their children prior to college, parents may not be realistic in their financial planning to help them go to college. For example, The Institute's survey of parents found that the average amount saved by parents for their children's education was $9,956, or about 25 percent of the average price of attendance at a public four-year college over four years.

Previous research on the parents of children entering 10th grade reveals that, when asked how they planned to pay for college, the top choice was savings,

followed by grants and scholarship, and loans. Current income — cited above as the top actual source of funds — was a distant fourth, suggesting that a severe dichotomy exists between intentions and reality among parents in their college financial planning. It is also fair to note that financial planning is difficult at a time when college prices are outpacing inflation.

- The most important factors influencing how much parents pay to assist their children appear to be income and the total price of attendance.

The provision, amount, and source of parental financial assistance varies according to specific demographic and institutional characteristics. In particular, the level of parent income and the total price of attendance best explain the variation in parental behavior. According to The Institute's survey of parents, for example, students from families with incomes of $100,000 or more received an average of $9,373 in gifts, whereas their counterparts from families with incomes under $20,000 received only $2,825. At the same time, parent income is closely tied to the choice of institution, which in turn determines the price of attendance.

After accounting for the influence of other variables, the study reveals a significant relationship between parents' efforts to save (the total amount saved relative to their annual income) and the amount they contribute to their children's educational expenses. This finding suggests that parents who place a high priority on saving for education tend to give their children more support. The effects of other variables, such as the degree aspirations of the children or the type of institution (two-year or four-year, public or private) attended, generally occur through the influences of parent income and price of attendance.

- Parents are using their experience and knowledge to assist their children prior to college enrollment.

Given the complexity of admissions and financial aid procedures, it is not surprising that parents assist their children in many ways prior to enrollment. According to The Institute's national survey of parents of current college students, for example, only 6 percent of parents did not participate in any part of the admissions process. In addition, parents participate widely in helping with financial aid applications and planning a financing strategy.

However, previous studies indicate that parents' awareness of many aspects of admissions and financial aid could be improved, especially for parents who did not go to college themselves. It is clear that parents who attended college have an inherent advantage in helping their children enroll in higher education.

Issues for further examination

The findings of this report suggest several other avenues of investigation into the parents' role in their children's pursuit of higher education. These include the following:

- This report has focused exclusively on the parent's part of the college decision-making process, despite the fact that students, institutions, and government policymakers are simultaneously involved. It would be useful to place the parents role in the context of an overall decision-making system, in which each of the participants reacts to the others' choices and characteristics.

- Parents face a broad range of financing decisions, including more than just their children's postsecondary education. For example, parents may

Parents are using their experience and knowledge **to assist their children** prior to college enrollment.

Parents are important contributors to **students' college choices** and financing patterns.

give money to their children for college, but then borrow to buy a new car, take a vacation or make home repairs — items that otherwise would have been paid through non-borrowed funds. Thus, an additional direction of study would be to examine financial assistance to students within the total context of families' financial decisions.

- This report has drawn conclusions regarding changes in the parents' role based upon evidence derived from a variety of studies, all of which collect data from a certain point in time. For instance, The Institute survey data was gathered primarily regarding the 1997-98 academic year; the NPSAS data was examined for two specific academic years. True measures of change would require consistent questions and consistent sampling over an appropriate period of time.

Nevertheless, this report has examined a broad range of issues related to the parent's role. It establishes parents as important contributors to students' college choices and financing patterns. Perhaps most significant, it recognizes factors impacting this role and rules out others that might, at first glance, have been thought to be more influential. Policymakers seeking to mitigate the burden on parents or influence attendance and financing decisions must recognize these interrelationships and adjust policy accordingly.

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APPENDICES

A brief explanation of correlation and regression

Pairwise correlation is used to indicate that a certain proportion of the movement in one variable (over time or under varied circumstances) can be matched with movement in another variable. Thus, it examines pairs of variables without taking into account the influences of other variables. A value of 1.0 (or, -1.0 if the two variables are inversely related) means a perfect match — the proportional variation in one variable exactly matches the proportional variation in some other variable. A value of zero, on the other hand, signifies that no correlation appears to exist. With pairwise correlation, there is no statistical need to designate one variable as dependent and another as independent — although the theory under consideration may require such a designation.

Multiple regression analysis, on the other hand, is a statistical method for examining relationships between any number of variables. It analyzes the correlation of a dependent variable and any given independent variable, where the correlation between the dependent variable and that independent variable has already allowed for the inter-correlation between all other independent variables. For example, we would expect the relationship between parent education and income to be quite high. Thus, simply observing that parental gifts to matriculating children is highly and positively correlated with both parent income and parent education overemphasizes the importance of each independent variable. Additional information is provided if the relationship between parent income and parent education is accounted for prior to examining their interrelationship with parent gift giving.

Regression analysis tests — but should never be allowed to replace — a sound explanatory theory. Such a theory indicates how a certain value (for example, parental lending) is dependent upon a number of factors, which can be termed "independent variables" (such as parental education, the costs of education and so on).

In general, the form of a multiple regression equation is:

$$Y = B_0 + B_1X_1 + B_2X_2 + \ldots\ldots + e$$

where Y is used to represent the mean of the dependent variable (such as parental gift giving or lending to children); B_0 is a "constant term" (which captures the concept that gift giving or lending might be some positive amount irrespective of the characteristics listed in the remainder of the analysis); and B_1, B_2 and so on represent the proportion of the mean value of the dependent variable that can be explained by the first characteristic, the second characteristic and so on. Thus, the coefficient of each independent variable in multiple regression indicates the proportion of movement in the dependent variable that corresponds with movement in any specific independent variable after the interrelationship between that independent variable and all other independent variables is accounted for. That is, a one unit increase in X_1 can be said to be associated with a B_1 increase in the dependent variable Y. The "e" term represents the residual values that are not "explained" by any of the preceding terms (the so-called "residual").

Regression results can be assessed by accuracy and predictive power by a variety of accompanying statistics:

- Notably, this equation is a straight line, whereas the relationship between the dependent variable and any or all of the independent

variables may not be represented by a straight line. In general, even a non-linear relationship can be converted to a linear one if the nature of the non-linearity is known. We assessed the data and relationships for non-linearity in their relationships prior to correlation and — despite the low explanatory power found in the linear relation — did not find any reason to examine a non-linear regression.

- The foremost measure of the predictive capacity of a specific regression is the total amount of variation in the dependent variable that is accounted for by the variation (after accounting for interrelationships) among the independent variables. Like the coefficient of correlation, this measure — the so-called R-squared value — is a number between zero and one,[34] where one would indicate that all variation is explained by the independent variables. The R-squared value should never be a substitute for theory, however. Not only does a high R-squared not imply causality, but also a large number of variables automatically leads to a higher R-squared term. For this reason, an R-squared that takes into account the number of equations is estimated — the "adjusted R-squared." The regressions completed for this paper uniformly produced low R-squared terms, indicating that there were other factors that influenced parental gift giving and lending rather than the independent variables that were used.

- Although multiple regression is designed to account for interaction among variables, too much interaction tends to bias the results of the analysis and yield faulty predictions. The problem is most acute when there is a fixed relationship between two or more independent variables; for example, parental education and household income. A number of statistical tests are designed to examine the data for this "multicollinearity." Using the results of these tests,certain independent variables are omitted from the regression if their correlation with other independent variables is too high — i.e., their influence on the dependent variable is nearly identical.

- To find out whether an independent variable was omitted from the regression that should have been included, one can examine the residuals to determine if a pattern emerges from them. There are also a number of statistical tests available to check for patterns in residuals. In the case of this report's regressions, no such pattern emerged.

- The "significance" of either correlation or multiple regression coefficients is a statistical measurement of the probability that the sample data reflect the distribution of the true population. We tested for the statistical significance of differences in means by use of the t-test and variants of the t-test (for example, the Bonferroni adjustment discussed below). Its calculation reflects both the dispersion of data found within the sample and the sample size; either a larger sample or less variation will lead to greater calculated significance. Although several relationships noted in the paper were statistically insignificant, they were reported along with that particular admonition because theory would have predicted a more "significant" relationship. Saying that any statistical measure (for example, the mean, standard deviation or correlation found within

a sample) is "significant" (within a certain range of confidence) merely means that the measure has an acceptable probability of reflecting the same measure of the true population — not that the finding is significant in its importance or is even worthy of the interpretation given to that statistic by the analyst. Only the validity and sensibility of the underlying theory can do that. Consequently the report has devoted a considerable amount of time to the theory of parent involvement in their child's education rather than simply looking at the numbers.

- The dispersion of the estimated equation — the difference between the estimates of the dependent variable given various values of the independent variables and the actual values of the dependent variable in the sample — is measured by the "standard error of the estimate" (in the case of the estimated equation as a whole) and the "standard error" of each individual coefficient. The greater the standard error, other things equal, the less significant (in a statistical sense) will be the coefficient.

Although this brief description of correlation and regression is not intended to be either a complete discourse or criticism of either technique, two other considerations are pertinent to the analysis of this report:

1. Causality cannot be implied by either a relatively high correlation or high level of significance. In fact, without the ability in social sciences to conduct controlled experiments (where one group is isolated from a certain independent variable and another is not), it is never possible to say that a certain finding "proves causality." The best that can be said is that the data is consistent with a proposed hypothesis — although inconsistency could lead one to reject the hypothesis.

2. In order to analyze the true importance of either correlation or multiple regression, it is important to examine the variation that is left unexplained by the independent variables (the so-called "residuals"). This variation requires that each observation (each student or parent, in this case) be examined vis-a-vis the statistical measures of the entire sample. Both the total amount of residual and the pattern of residual is important. The total amount reflects the amount of variance in the dependent variable that is left "unexplained." The pattern can provide an evaluation of the appropriateness of the selected independent variables and clues as to the variables that should have been included but were not.

These considerations led to both analysis of NCES data through the use of their Data Analysis System (DAS) and analysis of the results of the Institute's independent survey of parents.

Tests of statistical significance

Differences in means of variables in the cross tabulation sections of this paper — for both the NCES data and The Institute survey data — are statistically significant at the 0.05 level using a two-tailed Student's t-test, except those that are noted in the text. (One exception is the ratios of parent contributions to estimated family contributions and total costs of attendance using the NCES data, which were not tested because standard errors were not available for the calculated ratios.) The lack of significance for certain differences can be interpreted as a

relationship that is no greater than would be expected from chance alone. It should be noted, however, that the insignificance of a relationship where theory predicted a significant one can be as important as finding a statistically significant relationship.

Where multiple comparisons were involved, a Bonferroni adjustment was made to the tests of significance. Multiple t-tests would be inappropriate for comparison of a number of groups pairwise. The Bonferroni adjustment performs pairwise comparisons between group means, but controls for an acceptable overall error rate by setting the rate for each test to the total allowable error rate divided by the total number of tests. Hence, the observed significance level is adjusted for the fact that multiple comparisons are being made.

Description of the NCES data sets

The National Education Longitudinal Study (NELS) provides trend data following the 1988 eighth-grade cohort through their graduation from high school and transition into postsecondary education or the labor force. The most recent follow-up survey was conducted in 1994. Parents were surveyed in 1988 and 1992 regarding various aspects of their involvement in their children's educational progress. Thus, this data set can be used to examine parental involvement in the pre-college planning process.

The National Postsecondary Student Aid Study (NPSAS) describes postsecondary students at all institutional types and class levels, with particular attention given to student financial aid and educational expenses. In each survey, students and parents of a sub-sample of students were interviewed by telephone regarding issues that could not be gleaned from institutional records. The NPSAS study was administered in academic years 1986-87, 1989-90, 1992-93, and 1995-96. Although the studies are similar, the variables are not always comparable with each other — partly as a result of changes in survey design and partly due to changes in the external environment. For example:

- The NPSAS:87 study looked only at students enrolled in the fall semester, while subsequent studies sampled students enrolled throughout the year.
- The telephone surveys of both students and parents differed in size and composition between the studies. In addition, the survey questions regarding parental contributions did not address the same issues in NPSAS:96 as they did in prior studies.
- The demographics of all post-secondary students have changed gradually over the past 10 years, and changes in several key definitions were legislated — including changes in the definition of independent students and the methodology used to calculate estimated family contributions, which first became effective in the 1993-94 academic year.
- Large deviations in responses between consecutive NPSAS surveys more than likely represent differences in the manner in which the survey questions were asked rather than dramatic differences over time. For instance, large and erratic variances between years in the responses to the question of parent's intention to repay students' loans appear to reflect differences in interpretation of the question rather than differences in parental behavior.

Although the NPSAS survey years are not always directly comparable to each other, they can provide some sense of

trends in parental financial behavior. This paper focuses on 1992-93 data because it is the most recent year for which parent survey responses are both comprehensive and representative. Data from 1986-87 are frequently used as baseline figures (usually from Choy, Henke and Schmitt, 1992). Most of the NPSAS data presented in this paper are drawn from the student or the parent telephone surveys, or a combination of both:

- Data about sources of funds, such as parent borrowing, were drawn from the parent telephone survey component of NPSAS for all years.

- Data regarding parents' non-monetary contributions to their children were also drawn from the parent telephone survey for all years. Because non-monetary contributions are the most difficult type of contribution to quantify, the NPSAS studies have less information available about them than about gifts and loans.

- In 1992-93, data about the amount of gifts and loans students received from their parents for that academic year were drawn from student telephone survey responses. Questions about loan and gift amounts also were asked of parents, but as the variables were not continuous we decided to use the student-reported amounts after a comparison of the two revealed minimal differences.

- Data for the parent, student, and institutional characteristics were drawn from a variety of sources, including Department of Education records, students' financial aid forms, institutional records, and the student and parent telephone surveys.

One should note that the parent telephone surveys do not represent parents of all college students, because they are limited to parents of a particular sub-sample of students. In addition, the parent sample is tied to the student population, not the parent population as a whole.

Using the DAS

The NCES' Data Analysis System provides both crosstabulations (descriptive statistics) and correlation matrices for selected variables via the Internet. Use of the DAS for correlations and regression is limited, however. Primarily for reasons of privacy, the raw data are not generally available to the public. Without the raw data (that is, knowledge of each survey response), it is impossible to analyze the variation between the value that is predicted by a regression or correlation and each individual's response. Although totals of variations and totals of residuals are provided through the correlation matrices, the DAS mechanism does not allow for examination of the pattern of residuals. In addition, only continuous variables can be chosen as dependent variables in DAS regressions.

From the NELS data set, only descriptive statistics are presented in this paper. These statistics focus on various aspects of parents' involvement in planning for college and developing a financial aid strategy, and involve only parents of children who were enrolled in any postsecondary institution in October 1992 — the fall directly after high school graduation.

For the NPSAS data sets, information is drawn for dependent undergraduates only. Descriptive statistics are presented regarding parents' financial contributions to their children and the sources of those contributions. In addition, ratios were calculated that compared the average amounts of gifts and loans to the average estimated family contributions and

average costs of attendance for those families in which parents gave gifts or loans. Finally, correlations between various parent, student, and institutional characteristics and specific aspects of parents' behavior are noted.

As has been mentioned, crosstabs and correlations can only go so far in assessing relationships. Thus, various relationships in the NPSAS database were examined with regression techniques, using the DAS-generated correlation matrices. The regression values that were obtained from the correlation matrices are actually "partial correlation" coefficients, in which the effect of one independent variable on the dependent variable is measured after accounting for the impact of other variables. Regression analysis could only be performed on two dependent variables — the average amounts of gifts and loans from parents to students, which are both continuous variables in NPSAS:93. Other prospective dependent variables in the NPSAS studies are dichotomous (either a 1 or a zero, depending upon the characteristic defined) or categorical (income brackets, for example).

In order to isolate the characteristics that impacted gift giving and lending, we dealt with subsamples representing "parents who gave gifts" and "parents who gave loans" to their children for college education. Independent variables included were the level of parent education (BA or higher and some postsecondary education), total aid received by the student, the number of dependents for which the parents were responsible, the gender and race of the student, the age of the oldest parent, the parents' marital status, the student's educational aspirations (less than a BA and greater than a BA), the parent's annual income, and the annual costs of the college attended. The estimated coefficients and evaluative statistics for the two most useful DAS regressions are provided on Table 16, page 61.

Survey methodology

The Institute for Higher Education Policy commissioned Rickman Research & Communications (RRC) of Silver Spring, Maryland to conduct a national survey of parents who have at least one postsecondary student in their family. If the respondent had more than one child in college, he/she was asked to focus on the oldest child for the majority of the survey questions. The purpose of the survey was to determine the level of parental support before, during and (anticipated) after college. In order to reach parents of college students, a list of currently enrolled students was obtained from the American Student List Company (ASLC) of Mineola, New York. The list included home telephone numbers for more than 2 million students. To find a random selection of parents from across the United States, ASLC was asked to select 3,000 names from this using the "nth number" selection process.

A computer-assisted telephone interview (CATI) survey instrument was designed and pretested by a professional field service hired by RRC. The survey included "screener" questions to ensure respondent eligibility (parents had to have at least one child who had been enrolled in the 1997-98 academic year and was classified as financially dependent), and selection of appropriate question segments and skip patterns. The two monitored pretests looked for problems with the clarity of questions, quality of responses and the logic and effect of skip patterns. As is typical in survey research, several problems were revealed during the pretests that led to changes in the survey design.

The survey was conducted by the field service during June and July 1998. The telephone interviews averaged 12 minutes. A total of 750 interviews were completed, yielding a margin of error of approximately plus or minus 3.5 percent at the 95 percent confidence level.

Although this survey allowed us to surpass many of the limitations of the NCES data and the questions were carefully worded to be as clear as possible, the results of any survey are dependent on the knowledge and honesty of respondents. Self-reported data typically are more suspect for inaccurate responses than other forms of data collection, especially regarding financial information. In addition, the survey questions were asked of parents; it is likely that the students' perceptions of parent involvement would vary substantially. The sample itself may also be biased by the fact that parents who are willing to respond are also satisfied with their children's college progress and proud of their own involvement. As always, responses to questions dealing with past actions or future actions — such as the questions dealing with parents' involvement in the financial aid process, or their willingness to pay their children's loans in the future — are necessarily biased by recollection and future risks. In addition, it is impossible to assess any existing tendencies toward over- or under-reporting of income, assistance, student achievement and so forth without additional controlled surveys.

Confusion on the part of respondents may have led to errors in specific questions:

- When asked about "other" sources (in addition to savings, current income, and borrowed funds) that parents used for financial support for their children, some parents reported scholarships, other forms of financial aid that the student received, and students' own income, despite the fact that these sources did not actually come from the parent.

- Parents who had responded in one question that they had borrowed funds were asked follow-up questions asking for more details. In these subsequent questions, some respondents appeared to contradict their earlier statements by saying they had no loans. It is possible that they were politely refusing to answer the more detailed questions by responding "none." On the other hand, it is also possible that these respondents had been thinking of student loans in the first question.

Finally, many of the survey questions were formatted as categorical responses. Translating categorical data into continuous variables can pose a number of problems and present the possibility of statistical bias. We used mid-range points for categories when it was necessary to convert categorical data to numerical values, and used the lowest bounds for categories that had an open-ended range (for example, $60,000 and up). However, using the mid-point values can be misleading if there is an uneven distribution of responses within a specific category. This is especially true for the categories with open-ended ranges, in which the distribution of data cannot even be estimated.

Regression analysis of the survey responses

As noted previously, correlations between characteristics and parental actions: (1) should be screened by statistical techniques designed to account for interactions of independent variables; and (2) may be used, with caution, to predict the behavior of parents with respect to their involvement with their child's higher education. Without the various limitations of the DAS system, correlation and various forms of regression analysis could be performed on the survey data to achieve these objectives. To analyze the survey responses, we:

- "Scrubbed" the survey data so that the individual records used contained complete and usable data, and formatted the data in a manner that could be used in standard SPSS and InStat statistical packages.

- Examined correlations between variables such that the variables could be sorted according to the nature of the information that they provide and to eliminate pairs of data that convey information that is identical or nearly identical.

- Performed various forms of regression analysis on prospective dependent variables using a variety of independent variables that, according to theory, were important in the parental/student mix. The following analyses were performed: factor analysis, which identifies factors that, without additional analysis, appear to serve as robust predictors of the dependent variable; step-wise regression, which allows factors from an extended list to be included in an equation in the order in which inclusion meets significance criteria and enhances the R-square value by the greatest extent; and various forms of transformation of the independent variables, which identifies the extent to which the relationships are linear.

- Examined various forms of variables, such as savings as a proportion of parent income, parental assistance as a proportion of parent income, parental assistance as a proportion of college costs, and so forth.

- Generated regression equations where the variables included fit the theory and questions posed by the report itself. (See Table 17, p. 62.)

ENDNOTES

1. Students are classified as independent if they meet one or more of the following criteria: age 24 or older; a veteran of the armed forces; married; legal dependents other than a spouse; enrolled in graduate or professional school; or an orphan or ward of the court. All other students are classified as dependent.

2. An additional question that could be asked is: How do differences in parental support alter their child's achievement and persistence? This question is not addressed by this paper. See, for example, Flint, 1997, pp. 313-344.

3. These data sets include the National Education Longitudinal Study (NELS) and the National Postsecondary Student Aid Study (NPSAS); for details, see the appendices.

4. For details on survey methodology, see the appendices.

5. Total price of attendance generally includes all educational and living expenses, including tuition, required fees, room, and board. It should be distinguished from net price, in which the financial aid received by the student is subtracted from the total price of attendance.

6. These changes included the creation of the unsubsidized Stafford loan program; a redefinition of independent students; the removal of home and farm equity from estimated family contribution (EFC) calculations; and the removal of annual borrowing limits from the Parent Loans for Undergraduate Students (PLUS) program.

7. Nor are schools required to match aid packages to the amount of a student's aid eligibility.

8. Another more recent NCES study also found a clear relationship between parent income and the type of institution their children attend. For example, 15 percent of undergraduates enrolled in private, non-profit, four-year, doctorate-granting institutions (those generally having a greater price of attendance) were dependents in families with incomes of more than $100,000 a year, compared with 10 percent of students enrolled in public, four-year, doctorate-granting institutions. At the same time, about one-third of dependent students enrolled in private, for-profit institutions were from families with incomes under $20,000, compared with 18 percent of students each attending public institutions and private, non-profit institutions. See Horn and Berktold, 1998, p. 79.

9. It is important to note that dependent undergraduates from lower-income families were much more likely to receive financial aid than those from families with higher incomes, and significantly higher proportions of black, non-Hispanic undergraduates received financial aid (68 percent) than white, non-Hispanics (48 percent) or Asian/Pacific Islanders (48 percent). Dependent students in private, for-profit institutions were also more likely to receive federal financial aid (69 percent) than dependents in either public or private, non-profit institutions (31 percent and 57 percent, respectively; table 5.2a). See Horn and Berktold, 1998, p. 115.

10. This relationship is complicated by the fact that children from wealthier families tend to go to more expensive institutions more frequently than their lower-income counterparts.

11. One reason for this expectation is that family income appears to be positively related to parents' savings; see Stage and Hossler, 1989.

12. This relationship is complicated by the fact that the differences may be related to income.

13. From another perspective, financial aid might be considered an institutional characteristic, in the sense that institutions vary widely in the amount of institutional aid they offer to their students. However, this report does not address institutional aid alone.

14. The two data sets are accessible through the proprietary system developed by NCES called the "Data Analysis System" (DAS), which provides aggregate cross tabulations and correlation matrices. The findings presented here are generally derived from The Institute for Higher Education Policy's analysis of DAS-retrievable data. For more information, see the appendices.

15. Data from 1986-87 are generally taken from the analysis of NPSAS:87 in Choy, Henke, and Schmitt, 1992. Data from the 1995-96 NPSAS study are not presented here because of the fact that many of the survey questions

from previous NPSAS studies were eliminated or changed. In addition, the parent sample was slightly different in NPSAS:96.

16. However, because of the number of factors affecting the relationship, the direction or existence of causation is unclear from this analysis.

17. According to the NPSAS data, in 1992-93, about 48 percent of undergraduates were financially dependent on their parents.

18. In the NPSAS data, total price of attendance is represented by an attendance-adjusted "student budget" variable, which includes the price of tuition, required fees, room, and board.

19. One should note that this section focuses on a specific population of students—those who received gifts and loans. For example, the regression results attempt to explain the variation in gift amounts *for those who received gifts.*

20. Correlation may be interpreted as the percentage of variation in one set of numbers that corresponds to the variation in another set of numbers. Even with a low correlation coefficient, there is still a possibility that a significant relationship does exist. See appendices for details.

21. Due to the nature of the Data Analysis System, this regression analysis has some important differences from the standard type of regression analysis, largely because of the fact that individual records are not generally available to the public. For a detailed explanation of regression analysis using the DAS, see the appendices.

22. One should note that all of these options are not mutually exclusive, and it is likely that overlap exists.

23. In NPSAS:96, 60 percent of dependent students attended four-year institutions, while 62 percent were enrolled exclusively full-time for the full year. For a more detailed description of the survey methodology, see the appendices.

24. Parents could respond "both" if their child had lived both at home and at school during the last school year.

25. The differences by race/ethnicity were not statistically significant.

26. The price of attendance was calculated from the levels of tuition and fees and room and board reported by the parents.

27. Some of the parents misunderstood the survey question and reported such things as scholarships and the student's own income as "other sources" of the funds the parents provided.

28. In fact, the variance about this mean for each category is about plus or minus 25 percent.

29. Differences by institutional control and minority status were not statistically significant.

30. Differences by marital status were not statistically significant.

31. Note that only parents who reported using at least some of their savings as a source of funds were asked about the amount and starting point of their savings.

32. For a more detailed description of the regression analysis procedure and results, see the appendices.

33. Note that the NPSAS responses are for only those parents who gave gifts or loans and are for the current year, while The Institute survey questions were asked of all parents and reflect their children's entire academic career. In addition, these figures on savings and borrowing do not include parents who used retirement and trust funds, and refinancing real estate, respectively.

34. The R^2 can be greater than one only if the equation is not allowed to have a constant term.

35. Under some assumptions (mainly relating to whether the distribution of the sample is "normal" or not) the analysis of variance of summary data will yield equivalent results as the analysis of variance of each individual record. However, this fact cannot be ascertained without examining the nature of each individual sample.

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Table 1

College Enrollment Rates of High School Graduates, by Gender: 1960-95

Numbers in thousands

YEAR	TOTAL		MALES		FEMALES	
	Number	Percent	Number	Percent	Number	Percent
1960	758	45	408	54	350	38
1961	847	48	445	56	402	41
1962	900	49	480	55	420	43
1963	784	45	415	52	369	39
1964	1,037	48	570	57	467	41
1965	1,354	51	718	57	636	45
1966	1,309	50	709	59	600	43
1967	1,311	52	658	58	653	47
1968	1,444	55	748	63	696	49
1969	1,516	53	812	60	704	47
1970	1,427	52	741	55	686	49
1971	1,535	53	788	58	747	50
1972	1,457	49	749	53	708	46
1973	1,425	47	730	50	695	43
1974	1,474	48	736	49	738	46
1975	1,615	51	796	53	819	49
1976	1,458	49	685	47	773	50
1977	1,590	51	773	52	817	49
1978	1,584	50	758	51	826	49
1979	1,559	49	743	50	816	48
1980	1,524	49	701	47	823	52
1981	1,646	54	816	55	830	53
1982	1,568	51	739	49	829	52
1983	1,562	53	721	52	841	53
1984	1,662	55	800	56	862	54
1985	1,539	58	754	59	785	57
1986	1,499	54	744	56	755	52
1987	1,503	57	746	58	757	55
1988	1,575	59	761	57	814	61
1989	1,463	60	696	58	767	62
1990	1,410	60	676	58	735	62
1991	1,420	62	656	58	763	67
1992	1,479	62	725	60	754	64
1993	1,464	63	668	60	797	65
1994	1,559	62	754	61	805	63
1995	1,610	62	775	63	835	61

Note: Enrollment in college as of October of each year for individuals age 16 to 24 who graduated from high school during the preceding 12 months. Data are based upon sample surveys of the civilian population. High school graduate data in this table differ from figures appearing in other tables because of varying survey procedures and coverage. High school graduates include GED recipients.

Source: American College Testing Program, unpublished tabulations, 1987, derived from statistics collected by the U.S. Bureau of the Census; and U.S. Department of Labor, *College Enrollment of High School Graduates*, various years. (This table was prepared May 1996.)

Table 2a

Average Earnings Relative to Education, Males, by Race, 1975-94

High School Graduate = 100%

	WHITE		BLACK		HISPANIC	
	Some college	College graduate	Some college	College graduate	Some college	College graduate
1975	103%	150%	108%	144%	103%	151%
1976	101%	148%	108%	152%	92%	142%
1977	102%	150%	107%	139%	96%	146%
1978	100%	148%	113%	162%	106%	154%
1979	108%	157%	112%	152%	107%	162%
1980	106%	155%	107%	135%	109%	147%
1981	106%	153%	115%	140%	114%	142%
1982	105%	158%	108%	148%	112%	163%
1983	106%	160%	126%	170%	114%	150%
1984	104%	159%	121%	178%	110%	151%
1985	111%	167%	120%	174%	116%	158%
1986	111%	170%	123%	165%	123%	172%
1987	111%	166%	122%	158%	116%	158%
1988	110%	165%	118%	174%	124%	154%
1989	113%	170%	122%	165%	127%	186%
1990	116%	172%	124%	173%	124%	174%
1991	111%	168%	118%	150%	118%	171%
1992	111%	172%	134%	183%	119%	173%
1993	110%	180%	116%	188%	119%	200%
1994	108%	182%	128%	184%	125%	172%

Note: Persons of Hispanic origin may be of any race. Prior to 1991, "some college" was represented by 1-3 years of college; "completed college" was represented by 4 years of college or more.

Source: U.S. Bureau of the Census, *Current Population Surveys.*

Table 2b

Average Earnings Relative to Education, Females, by Race, 1975-94

High School Graduate = 100%

	WHITE		BLACK		HISPANIC	
	Some college	College graduate	Some college	College graduate	Some college	College graduate
1975	103%	142%	122%	170%	102%	132%
1976	101%	139%	105%	161%	99%	134%
1977	103%	138%	113%	165%	102%	166%
1978	103%	133%	112%	158%	115%	166%
1979	106%	138%	113%	168%	105%	137%
1980	111%	141%	114%	165%	127%	153%
1981	109%	139%	115%	159%	114%	148%
1982	107%	142%	110%	152%	114%	158%
1983	109%	149%	111%	160%	105%	146%
1984	110%	153%	117%	180%	114%	152%
1985	113%	157%	116%	179%	121%	158%
1986	112%	164%	119%	187%	123%	156%
1987	114%	159%	119%	171%	131%	169%
1988	117%	161%	127%	173%	124%	175%
1989	118%	167%	118%	185%	123%	192%
1990	115%	167%	125%	190%	126%	160%
1991	115%	165%	123%	197%	121%	159%
1992	113%	167%	115%	181%	120%	165%
1993	113%	173%	124%	191%	112%	159%
1994	113%	174%	116%	198%	121%	167%

Note: Persons of Hispanic origin may be of any race. Prior to 1991, "some college" was represented by 1-3 years of college; "completed college" was represented by 4 years of college or more.

Source: U.S. Bureau of the Census, *Current Population Surveys.*

Table 3

Average Student Assistance, 1992-93 and 1995-96

Percent receiving assistance and average amounts received

	Public 2-year		Public 4-year		Private, non-profit 4-year		Private, for-profit	
	1992-93	1995-96	1992-93	1995-96	1992-93	1995-96	1992-93	1995-96
Total	$1,854	$2,112	$3,785	$5,220	$7,125	$8,877	$4,100	$5,036
	27%	35%	46%	56%	61%	71%	72%	78%
Grants	$1,325	$1,288	$2,191	$2,561	$4,709	$5,385	$1,960	$1,968
	24%	29%	36%	41%	54%	61%	54%	56%
Loans	$2,264	$3,000	$2,959	$4,133	$3,728	$4,584	$3,479	$4,125
	7%	8%	25%	36%	36%	45%	46%	56%
Work-Study	$1,494	$1,424	$1,306	$1,432	$1,261	$1,371	$2,291	$1,260
	2%	2%	6%	6%	16%	17%	1%	0%

Source: Tuma et. al., 1995, p. 9 and NPSAS:96 as reported in the Data Analysis System.

Table 4

Median Family Income and Average Price of Attendance, 1977-96

In current dollars

Year/Academic year ending:	Median family income	Average undergraduate tuition, fees, room, and board	Ratio of average price of attendance to family income
1977	$16,009	$2,275	0.14
1978	$17,640	$2,411	0.14
1979	$19,587	$2,587	0.13
1980	$21,023	$2,809	0.13
1981	$22,388	$3,101	0.14
1982	$23,433	$3,489	0.15
1983	$24,580	$3,877	0.16
1984	$26,433	$4,167	0.16
1985	$27,735	$4,563	0.16
1986	$29,458	$4,885	0.17
1987	$30,970	$5,206	0.17
1988	$32,191	$5,494	0.17
1989	$34,213	$5,869	0.17
1990	$35,353	$6,207	0.18
1991	$35,939	$6,562	0.18
1992	$36,573	$7,074	0.19
1993	$36,959	$7,452	0.20
1994	$38,782	$7,931	0.20
1995	$40,611	$8,306	0.20
1996	$42,300	$8,800	0.21

Source: U.S. Department of Education, National Center for Education Statistics, 1997, *Digest of Education Statistics 1997*, Washington, DC: GPO; U.S. Census Bureau, 1997, "Table F-6: Regions: Families (all races) by median and mean income, 1953 to 1996," *March Current Population Survey*.

Table 5

Consumer Credit Outstanding and Personal Income, 1977-96

Amount outstanding (end of year); billions of dollars, seasonally adjusted

Year	Total consumer credit	Aggregate Personal income	Ratio of consumer credit to personal income
1977	$258	$1,611.4	0.160
1978	302	1,820.2	0.166
1979	344	2,049.7	0.168
1980	350	2,285.7	0.153
1981	368	2,560.4	0.144
1982	385	2,718.7	0.141
1983	434	2,891.7	0.150
1984	513	3,205.5	0.160
1985	593	3,439.6	0.172
1986	646	3,647.5	0.177
1987	676	3,877.3	0.174
1988	719	4,172.8	0.172
1989	779	4,589.3	0.174
1990	789	4,791.6	0.165
1991	777	4,968.5	0.156
1992	780	5,264.2	0.148
1993	839	5,480.1	0.153
1994	960	5,753.1	0.167
1995	1094	6,115.1	0.179
1996	1080	6,501.4	0.166

Note: Total consumer credit covers most short- and intermediate-term credit extended to individuals through regular business channels, usually to finance the purchase of consumer goods and services or to refinance debts incurred for such purposes. Credit secured by real estate is excluded.

Source: Council of Economic Advisers, 1998, *Economic Report of the President*, Washington, DC: GPO, Tables 25 and 77.

Table 6

Parent Income and Students Receiving Gifts, Loans, and In-Kind Payments from Parents, Fall 1986

	Less than $12,000	$12,000 to $23,999	$24,000 to $29,999	$30,000 to $49,999	$50,000 to $74,999	$75,000 to $99,999	$100,000 or more
Percent of students receiving assistance	83.6	90.6	94.6	96.6	97.8	98.9	96.9
Average amount received	$3,725	$4,187	$5,364	$6,142	$8,091	$10,072	$12,457

Note: The estimated value of non-cash ("in-kind") contributions, such as housing and clothing, were included in these calculations.

Source: Choy, Henke, and Schmitt, 1992, pp. 11-12.

Table 7

Gifts, Loans, and Non-Monetary Contributions from Parents to Students

	GIFT		LOAN		NON-MONETARY	
	Percent receiving	Average amount	Percent receiving	Average amount	Percent receiving	Average amount
1986-87	67%	$3,902	11%	$2,732	83%	$3,187
1992-93	66%	$4,535	12%	$2,358	82%	na

Note: Calculations are only for families of dependent students.

Source: NPSAS:87, Choy, Henke, and Schmitt, 1992, pp. 11-12, NPSAS:93.

Table 8

Parental Contribution (Gift and Loan) Compared with Average EFC

	Average estimated family contribution (EFC), composite	Average estimated parent contribution (EPC)	Gift: average amount	Loan: average amount	Gift: ratio to average EFC	Loan: ratio to average EFC	Gift: ratio to average EPC	Loan: ratio to average EPC
1986-87	$9,459	na	$3,902	$2,732	41%	29%	na	na
1992-93	$10,275	$7,269	$4,535	$2,358	44%	23%	62%	32%

Note: Average EFC is calculated for only those families in which the parents gave gifts or loans to their children, and are aggregate figures. In addition, these figures include only families of dependent students.

Source: NPSAS:87 and NPSAS:93.

Table 9

Parental Contribution (Gift and Loan) Compared to Total Price of Attendance

	Average price of attendance (student budget)	Gift: average amount	Loan: average amount	Gift: ratio to average price of attendance	Loan: ratio to average price of attendance
1986-87	$5,660	$3,902	$2,732	69%	48%
1992-93	$8,754	$4,535	$2,358	52%	27%

Note: Average price of attendance is calculated for only those families in which the parents gave gifts or loans to their children, and are aggregate figures. In addition, these figures include only families of dependent students.

Source: NPSAS:87 and NPSAS:93.

Table 10

Demographics of The Institute Survey Sample

Sample size, n = 750

Parent characteristics:		Student characteristics:		Institutional characteristics:	
Married	84%	1st/2nd year in college	47%	Public	70%
Not married	16%	3rd year or higher	53%	Private	30%
Age of oldest parent:		Male	49%	Two-year	4%
44 or younger	16%	Female	51%	Four-year	96%
45 to 54	68%				
55 or older	13%				
Other/refused	3%				
Highest education level:		Lived at home	27%	In-state	79%
High school or less	14%	Lived at school	70%	Out-of-state	21%
Some college	21%	Both[24]	3%		
Completed college	31%				
Advanced degree	33%				
Refused	1%				
Income:		Full-time attendance	97%	Annual tuition:	
Less than $20,000	4%	Part-time attendance	3%	$2,000 or less	7%
$20,000 to $59,999	27%			$2,001 to $10,000	44%
$60,000 or more	39%			$10,001 or more	28%
Refused	29%			Don't know/refused	21%
Caucasian	86%	Rank in high school class:			
Other race	11%	Top 10%	41%		
Refused	3%	Top 25%	30%		
		Top half	20%		
		Bottom half	3%		
		Does not rank/don't know	7%		
One child enrolled in college	67%				
More than one	33%				
Expected degree for child:					
High school	0%				
Certificate/associate's	1%				
Bachelor's	53%				
Advanced	40%				
Other/don't know	5%				

Note: Percentages may not add to 100 due to rounding.

Table 11

Average Gift Amount, by Selected Characteristics

Annual tuition: $1,001 to $2,000	$3,244	$20,001 or more	$12,906
Student lives: At home	$4,289	At school	$6,589
Public institution	$5,025	Private institution	$8,280
Location: In-state	$5,155	Out-of-state	$9,123
Parents' expectations: Bachelor's degree	$5,557	Professional degree	$7,618
Parents' income: Under $20,000	$2,825	$100,000 or more	$9,373
Parents' highest education: High school	$4,032	Graduate degree	$7,777
Parent: Not married	$3,846	Married	$6,392
Minority	$4,110	White	$6,280
Student used own income	$5,551	Did not use own income	$7,242
Student used financial aid	$5,091	Did not use financial aid	$6,934
Student: Female	$5,655	Male	$6,484

Note: The differences by parents' expectations, minority status, and gender were not statistically significant.

Table 12

Average Loan Amount, by Selected Characteristics

Tuition: $2,001 to $3,000	$1,733	$20,001 or more	$7,125
Public institution	$3,144	Private institution	$5,327
Location: In-state	$3,405	Out-of-state	$5,911
Parents' expectations: Bachelor's degree	$3,033	Master's	$4,073
Parents' income: $20,000-29,999	$3,167	$100,000 or more	$6,588
Minority	$900	White	$4,150
Student used financial aid	$3,579	Did not use financial aid	$4,368
Student: Male	$3,409	Female	$4,726

Note: The differences by parents' expectations, minority status, and gender were not statistically significant.

Table 13

Average Ratio of Total Contributions to Total Price of Attendance, by Selected Characteristics

Student lives: At home	16%	At school	43%
Parents: Income under $20,000	12%	$100,000 or more	58%
Parents' highest education: High school	28%	Graduate degree	49%
Minority	14%	White	39%
Student used financial aid	29%	Did not use financial aid	45%

Table 14

Proportion of Parents' Total Contributions Obtained from Various Sources

	Percent of all parents who used this source	Average proportion of total contribution	
		All parents	Only parents who used this source
Current income	71%	36%	50%
Savings	51%	24%	47%
Borrowed funds	24%	12%	48%
Other	18%	9%	52%

Table 15

Sources of Funds Used by All Parents, by Selected Characteristics

(as proportion of their total contributions to their children)

SAVINGS:			
Parent: More than three children*	19%	One child	25%
Parent: Income under $20,000	16%	$100,000 or more	30%
Parents' highest education level: High School	18%	Graduate degree	29%
Minority*	19%	White	24%
Parent: Age 40 to 44*	20%	Age 60 or older	30%
Tuition: $1,000 or less	17%	$20,001 or more	29%
CURRENT INCOME:			
Parent: One child	29%	More than three	40%
Parents' highest education level: High school*	31%	Graduate degree	37%
Tuition: $1,000 or less*	31%	$20,001 or more	34%
BORROWED INCOME:			
Parent: Age 60 and older*	11%	Age 40-44	14%
Public institution	9%	Private institution	18%
Tuition: $1,000 or less	3%	$20,001 or more	14%

Note: * means not a statistically significant difference.

Sources for Tables 11-15: The Institute Survey of Parents, 1998.

Table 16

DAS Regression Results

Dependent variable: Gift amount (regression among only those parents that gave gifts)				**Dependent variable: Loan amount** (regression among only those parents that gave loans)			
R-Square: .448				R-Square: .177			
	Coefficient	Standard Error	t-ratio		Coefficient	Standard Error	t-ratio
(Constant)	-1973.44	380.137	-5.191	(Constant)	-778.82	616.083	-1.264
Student Aspirations (less than BA)	-544.19	487.889	-1.115	Student Aspirations (less than BA)	195.08	523.984	.372
Student Aspirations (more than BA)	311.61	247.071	1.261	Student Aspirations (more than BA)	244.72	291.878	.839
Gender (Female)	374.19	210.322	1.779	Gender (Female)	319.24	263.069	1.213
Race (Nonwhite)	442.16	265.390	1.666	Race (Nonwhite)	-200.09	320.946	-.623
Marital Status (Non-married)	486.61	290.813	1.673	Marital Status (Non-married)	363.77	341.311	1.066
Total Aid Received	-0.55	.034	-15.740	Total Aid Received	-0.04	.047	-.944
Parent's Income	0.05	.005	9.891	Parent's Income	0.03	.007	3.916
Total Number of Dependents	-121.88	84.293	-1.446	Total Number of Dependents	-50.63	85.356	-.593
Costs of College	0.57	.023	25.144	Costs of College	0.13	.031	4.233
Parents' Education Level (some college)	-394.02	306.922	-1.284	Parents' Education Level (some college)	-296.39	360.527	-.822
Parents' Education Level (BA or higher)	622.34	262.788	2.368	Parents' Education Level (BA or higher)	55.88	329.082	.170
				Parents' Age	17.15	6.655	2.577
				Class level (2nd year)	-122.99	356.964	-.344
				Class level (3rd year)	705.59	456.029	1.547
				Class level (4th or 5th year)	184.13	429.609	.429
				Class level (unknown)	680.58	1616.461	.421

Note: These figures have been adjusted to reflect the sampling design of the NPSAS surveys, using the DAS-generated DEFT (design effect) figures.

Table 17

The Institute Survey Regression Results

Dependent variable: Total contribution from parent				**Dependent variable: Total contribution from parent**			
R-Square: .2965				R-Square: .3596			
	Coefficient	Standard Error	t-ratio		Coefficient	Standard Error	t-ratio
(Constant)	-4944.8	1083.7	4.563	(Constant)	-4848.9	4251.8	1.140
Annual Price of Attendance	0.2625	0.04343	6.046	Number of Dependents	222.07	453.49	.4897
Parents' Annual Income	1061.4	131.90	8.047	Year in School	-332.63	347.97	.9559
Dependent variable: Total contribution from parent				Student Gender	185.26	793.38	.2335
R-square: .3207				Control of School	-0.463.36	1018.4	.4550
	Coefficient	Standard Error	t-ratio	Expected Degree	-389.14	518.41	.7506
(Constant)	-10601	432.0	2.453	Class Rank	164.71	519.23	.3172
Number of Dependents	-238.72	464.40	0.5140	Parents' Highest Education Level	-31.266	433.85	.0721
Year in School	-129.03	349.03	0.3697	Annual College Price	0.2266	.05888	3.848
Student Gender	-131.08	806.69	0.1625	Age of Parent	299.02	398.66	.7501
Control of School	-86.384	1030.0	0.08387	Parents' Annual Income	1059.2	179.96	5.886
Expected Degree	161.44	525.94	0.3070	Students' Residence	-171.13	1299.9	.1317
Class Rank	631.99	519.80	1.216	Type of School	-.550.78	3947.1	.1395
Parents' Highest Education Level	295.15	444.26	0.6644	School's Location	-405.93	1028.1	.3948
Annual College Costs	0.2486	0.06012	4.136	Annual Savings / Income Ratio	0.7070	0.2233	3.166
Age of Parent	588.06	408.94	1.438	Marital Status of Parent	497.79	1271.4	.3195
Parents' Annual Income	1007.8	181.70	5.547	White /Non White	700.79	1576.9	.4447
Students' Residence	637.24	1274.2	0.5001				
Type of School	-805.75	4278.5	0.1883				
School's Location	-473.34	1028.1	0.4604				
Marital Status of Parent	835.21	1293.8	0.6456				
White /Non White	2017.4	1548.5	0.1940				

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